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Rehabilitation of Concrete Pavements Utilizing Rubblization and Crack and Seat Methods

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However, the design of structural overlay thickness for cracked and seated and rubblized pavements is difficult as the resulting structure is neither a "true" rigid pavement nor a "true" flexible pavement. Existing design methodologies use the empirical procedures based on the AASHO Road Test conducted in 1961. But, the AASHO Road Test did not employ any fractured slab technique, and there are numerous limitations associated with extrapolating its results to HMA overlay thickness design for fractured PCC pavements.

The main objective of this project is to develop a mechanistic-empirical (ME) design approach for the HMA overlay thickness design for fractured PCC pavements. In this design procedure, failure criteria such as the tensile strain at the bottom of HMA layer and the vertical compressive strain on the surface of subgrade are used to consider HMA fatigue and subgrade rutting, respectively. The developed ME design system is also implemented in a Visual Basic computer program.

A partial validation of the design method with reference to an instrumented trial project (IA-141, Polk County) in Iowa is provided in this report. Tensile strain values at the bottom of the HMA layer collected from the FWD testing at this project site are in agreement with the results obtained from the developed computer program.

Keywords
fractured PCC pavements, FWD, mechanistic-empirical design, rubblization

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REHABILITATION OF CONCRETE PAVEMENTS UTILIZING RUBBLIZATION AND CRACK AND SEAT METHODS

Final Report
June 2005

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EXECUTIVE SUMMARY

The most commonly used rehabilitation technique for deteriorated portland cement concrete (PCC) pavement is to overlay it with Hot Mix Asphalt (HMA). However, the performance of HMA overlaid PCC pavements is hindered due to the occurrence of reflective cracking, resulting in significant reduction of pavement serviceability. Reflective cracking is minimized by reducing the slab action using various fractured slab techniques, including rubblization, crack and seat, and break and seat. Currently, there is no viable design methodology for designing HMA overlay thickness for fractured PCC pavements. This report documents the development of a mechanistic-empirical (ME) design procedure for HMA overlay thickness design for fractured PCC pavements. In this design procedure, failure criteria such as the tensile strain at the bottom of HMA layer and the vertical compressive strain on top of subgrade are used to consider HMA fatigue and subgrade rutting, respectively. The developed ME design system is also implemented in a Visual Basic computer program. A partial validation of the design methodology with reference to an instrumented trial project (IA-141, Polk County, Iowa) is provided in this report.

INTRODUCTION

In Iowa, most surfaced highway pavements are of portland cement concrete (PCC) type. The PCC pavements include jointed reinforced concrete pavements (JRCP), jointed concrete pavements (JCP), and continuously reinforced concrete pavements (CRCP). These pavements usually deteriorate due to distresses caused by a combination of traffic loads and weather conditions. The need for repair or rehabilitation depends on the type and level of distress. Repair and rehabilitation activities are carried out to extend the service life of an existing pavement. As total reconstruction is very expensive and time-consuming, rehabilitation is frequently considered to be a better alternative.

Rehabilitation involves "measures to improve, strengthen, or salvage existing deficient pavements to continue service with only routine maintenance" (ITS 2000).

There are various alternatives for rigid pavement rehabilitation, which include bonded and unbonded overlays, full-depth repair, crack and seat asphalt overlay, joint and crack repairs, asphalt overlay, and rubblization with asphalt surface overlay. The selection of alternatives primarily depends upon the pavement type and its existing condition. Among all these alternatives, construction of Hot Mix Asphalt (HMA) overlays over existing concrete pavement is considered to be the most common type of rigid pavement rehabilitation. The use of HMA overlays is regarded as relatively quick and inexpensive measure to fix the deteriorated PCC pavement. However, their performance has proven less than satisfactory because of the "reflective cracking," significantly reducing the pavement serviceability.

HMA overlays usually exhibit reflective cracking, formed due to movements of underlying concrete slab; thus, the pavement serviceability reduces at a rapid rate. These cracks propagate through the HMA surface, producing tensile stresses caused by (a) discontinuities in underlying layers, (b) differential temperature conditions, and (c) longitudinal cracks in the old pavement surface (Roberts et al. 1996). The ingression of water and moisture through those cracks generally leads to the premature failure of the aggregate base and subgrade; hence, the cracks should be sealed.

Various methods are used to minimize reflective cracking, including rubblization, crack and seat, break and seat, sawcut and sealing, asphalt-rubber interlayer, paving fabric interlayer, and crack relief layer between the HMA overlay and the PCC. Most of these methods seek to destroy the slab action and reduce the slab to smaller component sizes or to provide an intermediate layer designed to "absorb" relative movements of the slabs rather than transferring these movements to the overlying hot mix asphalt.

Fractured slab techniques, including rubblization, crack and seat, and break and seat, seek to reduce the slab action. The reasoning behind these techniques is that as crack spacing decreases, the probability of reflective cracking likewise decreases (PCS 1991). According to Illinois Department of Transportation's (IDOT) monitoring study (Thompson 1999), break/crack and seat delayed the reflective cracks but did not eliminate the reflective cracking in the HMA overlay. Break/crack and seat methods involve breaking of the underlying rigid pavement into

relatively small pieces by repeatedly dropping a large weight with the help of pile drivers, guillotine hammers, etc. These pieces are then seated using large rubber tired rollers. This method has been traditionally used in Iowa since 1980.

Break/seat technique is generally applicable to JRCP, whereas crack/seat technique can be used for rehabilitation of JPCP. The major difference between the crack and seat and rubblization methods is the degree to which the slabs are reduced in size: crack and seat methods typically reduce the slabs to 12–24 in (305–610 mm) slablets, while rubblization totally destroys the slabs, effectively reducing them to granular or particular materials.

Rubblization is considered to be a viable, rapid, and cost-effective rehabilitation method for the deteriorated PCC pavements (Thompson 1999). This method involves breaking up the concrete slab into pieces. Typical rubblization specifications require a majority of the PCC pavement segment sizes to be less than about 2–3 in (50–75 mm) at the surface and 9–12 in (225–300 mm) in the lower part of the slab (Thompson 1999). It can be recommended for any type of PCC pavement. The results obtained from the investigation of PCS/LAW in 1991 indicate that the rubblization is the best rehabilitation technique and is followed by crack/seat, saw/seal, and then break/seat techniques (PCS 1991). The two types of equipment used for rubblization include (a) resonant breaker and (b) multiple-head breaker.

The design of the structural overlay thickness for cracked and seated and rubblized projects is difficult as the resulting structure is neither a “true” rigid pavement nor a “true” flexible pavement. Classical rigid pavement analysis and design is based upon the Westergaard theory, while classical flexible pavement analysis and design is based upon the Burmister multi-layer theory. These two approaches, while appropriate for one type of structure, are not appropriate for the other type of structure. However, on the assumption that the rigidity of the PCC slabs has been destroyed, the Burmister approach may be used with HMA overlaid fractured PCC pavement. It has been proposed that the Westergaard approach may be used to evaluate the pre-rubblized PCC slabs, whereas Burmister theory may be used for post-rubblization analysis.

The overlay methodologies based on the flexible pavement performance models may be sometimes erroneous. The National Asphalt Pavement Association (NAPA) and the Asphalt Institute (1989) proposed to use the American Association of State Highway and Transportation Officials (AASHTO) empirical procedures for the design of HMA overlay thickness. This method is not considered as a viable approach, since the method is empirically based upon the performance of rigid and flexible pavements at the AASHO Road Test (1958-1961) conducted in Ottawa, Illinois. This road test did not employ any fractured slab technique, and therefore there is no basis to extend the empirical design methods developed from AASHO Road Test to thickness design of HMA overlaid fractured PCC slabs. Also, since the time of AASHO Road Test, material specifications, traffic volumes and weights, and tire types and pressures have changed significantly, rendering these design approaches essentially little better than educated guesses. A more reasoned approach would be to develop a mechanistic-empirical (ME) design procedure which combines the soundness of mechanistic models with the experience from field data.

The objective of this project is to develop a ME design approach for the HMA thickness design of HMA overlaid fractured PCC slabs. In the ME design, the horizontal tensile strain at the bottom of HMA layer is used to consider HMA fatigue, and the vertical compressive strain on the surface of subgrade is used to consider rutting. A partial validation is provided with reference to an instrumented trial project in Iowa (IA-141, Polk County).

LITERATURE REVIEW

Common types of portland cement concrete pavements include (1) jointed reinforced concrete pavements (JRCP) with various joint spacing and steel reinforcement in the form of wire mesh or deformed bars, (2) jointed plain concrete pavements (JPCP) with closely spaced contraction joints and with or without load transfer at joints, (3) continuous reinforced concrete pavements (CRCP) with longitudinal reinforcing bars and without longitudinal joints, and (4) pre-stressed concrete pavement (PCP). Various pavements of these types deteriorate to a condition where they require rehabilitation or reconstruction to restore their serviceability. Rehabilitation involves "measures to improve, strengthen, or salvage existing deficient pavements to continue service with only routine maintenance" (ITS 2000). Reconstruction is the total replacement of the entire existing pavement structure.

Iowa counties have tried to rehabilitate the deteriorated PCC pavements with standard HMA overlays, open-graded bituminous mixes, fabric, and crack and seat followed by HMA overlays. The most common procedure for restoring a deteriorated PCC pavement serviceability is the construction of HMA overlay over the existing PCC pavement. However, the performance of HMA overlays is hindered by the occurrence of reflective cracking over the joints.

Various techniques are used to mitigate reflective cracking. Fractured slab techniques that have been successfully used to minimize reflective cracking include (a) crack and seat, (b) break and seat, and (c) rubblization. Crack and seat is limited only to unreinforced concrete pavements (JPCP), while break and seat is limited to reinforced concrete pavements (JRCP). Rubblization is generally applicable to all types of PCC pavements. In general, crack and seat projects are being concentrated more in the upper midwestern and western states. Break and seat projects are concentrated in the northeastern states and rubblization in the eastern states (PCS 1991).

This chapter presents a brief literature review on the design, construction, and performance of the crack and seat and rubblization techniques used for minimizing and controlling the reflective cracking.

Pavement Distress

There are two types of distresses that are commonly encountered in pavements: structural and functional. Structural distress is defined as the failure of the whole pavement structure or one or more pavement components, which in turn makes the pavement incompetent to sustain the imposed traffic loads. Functional distress is defined as the failure caused in the pavement when its intended function is not fulfilled by causing discomfort due to its roughness or ride quality. Functional distress may or may not be accompanied by structural failure (Yoder and Witczak

1975). For example, if an HMA overlaid PCC pavement develops rough spots on the surface as a result of break-up of overlay without structural breakdown of the overall structure, then it is considered a functional failure. If the same pavement cracks and breaks up as a result of excess loads, then it is a structural failure.

For functional failure, pavement resurfacing may be required to restore smooth riding qualities of the pavement, whereas for repair of structural failure, total reconstruction may be required. Thus, it is important to evaluate an existing pavement to identify its functional and structural deficiencies and select an appropriate pre-overlay repair, reflection crack treatments, and overlay designs to overcome the deficiencies.

PCC Pavement Rehabilitation Techniques

Deterioration in the overlays generally results from the deterioration that was not repaired in the underlying existing pavement. Thus, if the distress in the existing pavement is likely to affect the performance of the overlay, it should be repaired prior to the placement of the overlay. This process is termed as "pre-overlay repair." However, if the existing pavement is severely deteriorated, selecting a rehabilitation technique that is less sensitive to existing pavement condition may be more cost-effective than an extensive pre-overlay repair (AASHTO 1993). Thus, selection of rehabilitation technique depends on local conditions and type and level of pavement distress. These techniques typically include the following:

1. PCC overlays
    a. Bonded
    b. Unbonded
2. HMA overlays

Bonded PCC Overlays

Bonded PCC overlays consist of a thin concrete layer (4 in [100 mm] or less) over an existing pavement surface forming a monolithic or composite structure. These are primarily used to increase the structural capacity of the pavement. The primary advantages of these overlays include (a) lesser thickness compared to unbonded overlays and (b) strength of the underlying pavement accounted for by structural design. These are not recommended for severely deteriorated pavements as the level of distresses might affect the bond quality.

Unbonded PCC Overlays

Unbonded PCC overlays consist of a relatively thick concrete layer (5 in [125 mm] or greater) over an existing concrete surface. When compared to bonded PCC overlays, these are generally more cost-effective when an existing concrete pavement is severely deteriorated and its complete removal is not desirable. A separating layer or a debonding layer is used between the overlay and the existing pavement. Hence, these overlays do not require much pre-overlay repair before placement. The separating layer is generally about 0.5–1.5 in (13–38 mm) thick. This layer

allows the original pavement and overlay to act independently and helps in preventing reflection of distresses from the existing pavement into the overlay.

HMA Overlays

HMA overlay is the most commonly used PCC pavement rehabilitation technique. It can be used to improve both functional and structural capacities of an existing pavement. They provide smooth riding surface and the pavement can be opened to traffic within 48 hours after placement. Although HMA overlays are commonly used, their performance is hindered due to the occurrence of reflective cracks. Reflection cracks are cracks in the HMA overlay which reflect the crack pattern that existed in the underlying pavement prior to the placement of the overlay.

Reflective Cracking

Cracks that appear on the surface at location of pavement joints, when rigid pavements are resurfaced by bituminous materials, are termed as "reflective cracks" (Yoder and Witczak 1975). This is one of the most common types of distresses that occur in composite pavements. It generally occurs early in the service life of the pavement. These cracks propagate through the HMA overlay surface due to the movement at the crack (joint) producing tensile stresses which are caused by (a) discontinuities in the underlying layers, (b) differential temperature conditions, and (c) longitudinal cracks in the old surface (Roberts et al. 1996). A schematic diagram of reflection cracking is shown in Figure 1. Repetitive traffic loading causes differential vertical movements at the locations of joints and cracks in the slab, inducing tensile strains at the bottom of the HMA layer. The HMA layer, which lies immediately above these joints and cracks in the PCC slab, cannot accommodate these localized strains, and, thus, reflective cracks are generated (PCS 1991).

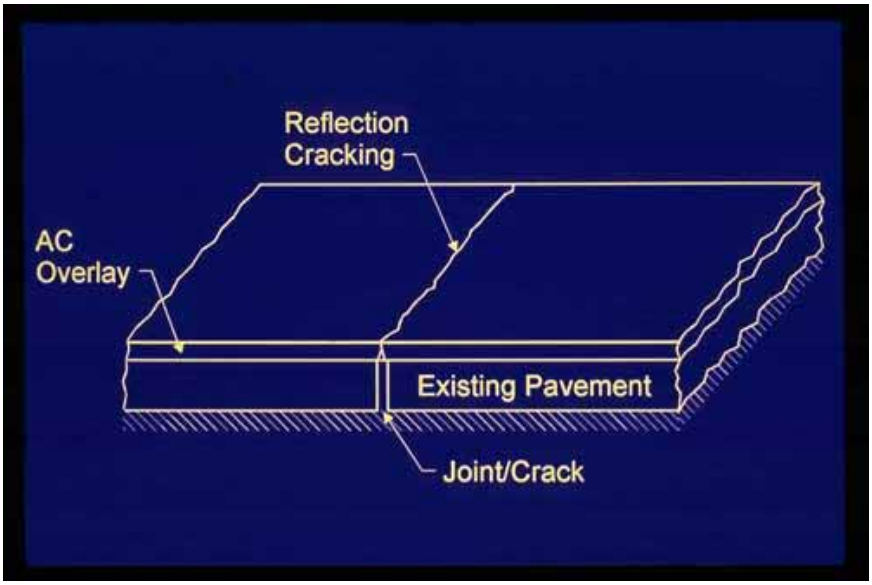

Figure 1. Schematic diagram of reflection cracking

Reflection cracks are not themselves detrimental to pavement performance, but water infiltrated through these cracks might deteriorate the underlying layers. Hence, these cracks should be sealed (Yoder and Witczak 1975). Cracks wider than 0.25 in (6 mm) are generally filled with asphalt-emulsion slurry or a light grade of cutback asphalt and fine sand (Asphalt Institute 1989).

Placing an open-graded friction course (OGFC) between the concrete pavement and the HMA overlay can serve as a buffer and help minimize the reflection cracking. The OGFC consists of large percentage of single-sized coarse aggregates to ensure greater drainability. However, stripping can occur directly beneath the OGFC, causing significant problems. Hence, it is very important to seal all the cracks before its construction. This method can be effective when a pavement has lost its skid resistance due to aggregate polishing and/or flushing.

Nevertheless, controlling the reflective cracks would be a better alternative than repair. Various techniques for controlling reflective cracking include the following:

1. Rubblization
2. Crack and seat
3. Break and seat
4. Sawcut and sealing
5. Asphalt-rubber interlayer
6. Paving fabric interlayer
7. Crack relief layer between overlay and PCC

Rubblization, break and seat, and crack and seat methods involve fracturing the slabs. These fractured slab techniques will rapidly reduce concrete slabs into pieces, allowing for compaction and reuse as a smooth, high-strength granular base for new pavements. This slab fracturing reduces the movement of the cracked or broken slabs beneath the overlay, which in turn reduces the critical (tensile) strains in the asphalt layer. The intent of cracking in crack and seat and break and seat is to produce tight cracks, which can permit a measure of load transfer with little loss of structural capacity, and the intent of seating is to reestablish the support of the slab foundation. However, there is a significant difference between these two methods. Crack and seat is used for rehabilitation of JPCP, which are structurally adequate but exhibit functional distresses. Break and seat is used with JRCP. This technique involves destruction of bond between reinforcing steel and concrete, which requires a large amount of energy. If the pavement deterioration is such that only a little slab integrity can be preserved after breaking, rubblization or reconstruction can be considered as an alternative process.

Saw and seal involves sawing the joints in the HMA overlay directly above joints and cracks in the PCC slab and then sealing the joints (PCS 1991). This technique is generally applicable for jointed reinforced pavements with long joint spacing. However, some states are using this technique on new construction and for HMA overlays over existing flexible pavements. It is generally recommended only if the pavement is in good condition and relatively free of large amounts of slab cracking. The success of this technique depends upon the accurate location of all joints and the sawing of new joints, which should be performed immediately after placing the overlay.

Asphalt rubber has been commonly used as an additive in various types of pavement construction since early 1970's. It is a blend of liquid asphalt and ground tire rubber. Estakhri et al. (1994) indicated that including an asphalt-rubber interlayer between the concrete and the HMA layer helped in reducing reflection cracking. Also, higher binder application rates lead to improved resistance to cracking. However, on many test sections, higher binder application rates caused flushing at the pavement surface. Lower concentrations of rubber appeared to perform better than higher concentrations (Estakhri et al. 1994).

In 1988, Arizona Department of Transportation (ADOT) used a 0.75-inch-thick open-graded asphalt-rubber mix over a plain jointed concrete pavement at a section on Interstate 19, located south of Tucson, which performed well with a few reflective cracks until 1996.

In recent years, paving fabric interlayers have been used to minimize reflection cracking. A membrane is prepared through the application of liquid asphalt cement, fabric, and an asphalt concrete overlay. This also serves as a waterproof layer and can be potentially used for the pavements where water intrusion is a significant problem. Lytton (1989) indicated that using fabrics as a reinforcement interlayer is cost-effective in field.

Crack relief layer is designed specifically to minimize the reflection cracking. It is placed as the first course in an overlay system. This layer typically consists of 3.5 in (89 mm) thick crushed open-graded HMA layer containing 25%-35% interconnecting voids. Thus, presence of large interconnecting voids in the crack relief layer provides a medium through which differential PCC slab movements are not readily transmitted. Existing pavement surface should be prepared so that it is structurally adequate and clean (Huang 2003).

It should be noted that the use of asphalt-rubber or aggregate interlayer and various fabric compositions have not proven to be consistently useful in eliminating reflective cracking. This may be due to poor construction quality and techniques applied. In general, fractured slab techniques have proven to be much more consistent in this regard.

Fractured Slab Techniques

Fractured slab techniques include rubblization, break and seat, and crack and seat. They have been used for many years in rehabilitation of pavements. The primary goal of these techniques is to reduce the reflective cracking in the HMA overlay by reducing the concrete slabs to pieces. A fundamental relationship that governs the fractured slab approach is, "as crack spacing decreases, the likelihood of reflective cracking decreases." This slab fracturing reduces the movement of the cracked or broken slabs beneath the overlay, which in turn reduces the critical strains in the overlying asphalt layer. If crack and seat and rubblized pavements are properly constructed, they are reasonably effective and no additional crack control treatment is required. These techniques are more cost-effective on severely deteriorated concrete pavements.

Bemanian and Sebaaly (1999) found that rut depths for a rubblized pavement and a pavement that was rehabilitated using crack and seat method were within the acceptable range. It was also found that after 4 years of performance, the ride quality of the crack and seat and rubblized

sections was within acceptable range. The NAPA study (1994) indicated that rubblization was the most effective procedure for addressing reflective cracking.

Although rubblization and crack and seat methods are the most common techniques for rehabilitation of existing PCC pavements, each state highway agency is unique in its selection and design of rehabilitation methods.

The economic analysis of the I-80 project conducted in Nevada indicates that the crack and seat has the lowest initial cost. However, both rubblization and crack and seat methods have approximately the same life-cycle cost when performance is projected over a 35-year analysis period. These life-cycle costs include all the costs that are associated with maintenance and repair of the pavement (Bemanian and Sebaaly 1999).

Crack and Seat

Crack and seat was not used extensively before the early 1980s. In Iowa, crack and seat was first used in 1986. It is a fractured slab technique, which typically involves breaking the existing concrete into pieces of sizes about 12–48 in (305–1220 mm) (Freeman 2002). This technique has been used on jointed plain concrete pavements from county roads to interstate highways.

According to Illinois DOT's monitoring study, break/crack and seat delayed the reflective cracks, but did not totally eliminate them in the HMA overlay. However, proper use of this technique will significantly delay the reflective cracking (Thompson 1999).

Study conducted by Kentucky demonstrated that the break/crack and seat techniques are also effective in eliminating blowups in the jointed PCC pavements (Drake 1988).

Crack and seat techniques involve four major steps: (a) cracking the concrete slab, (b) seating the cracked slab, (c) special treatments, and (d) AC overlay.

The cracking of the existing pavement is used to reduce the slab movement due to thermal action, thus minimizing or controlling the reflective cracking in the overlay. Cracking of the pavements can be accomplished with drop hammer, guillotines, modified pile drivers, or whip hammers. One of the commonly used equipment is drop hammer. These are self-propelled units that raise a heavy mass several feet above the pavement and then release the weight, which then falls and strikes the surface of the slabs. Some agencies require cracking in both transverse and longitudinal directions. The resulting pieces should be large enough to retain interlock between aggregates, but also small enough to minimize the joint movement of the unreinforced PCC pavement (PCS 1991). Excessive cracking can be detrimental to the PCC pavement.

The NAPA report indicated that reducing the length of the concrete slabs results in a significant reduction in reflection cracking. The smaller the cracked piece, the larger the potential for reduction in reflection cracking, but also the larger the reduction in the structural strength of the concrete pavement (Eckrose and Poston 1982).

After cracking, the slab is seated using 66–110 kip (30–50 ton) capacity rubber-tired rollers. Seating of the concrete is done in order to (1) ensure reestablishment of the support between the subbase and the slab by reducing the existing voids, (2) create a relatively uniform grade for supporting paving operations, and (3) locate soft zones in the underlying layers that may need to be removed and/or replaced with more stable material (Freeman 2002). Excessive rolling may be harmful to the slab.

Judith et al. (1995) indicated that a pavement rehabilitated with crack and seat technique can perform well when the subgrade support is uniform and subgrade modulus is more than 15,000 psi (103.4 MPa) after cracking.

The effective moduli of the existing pavement decreases after performing crack and seat operations. Non-destructive testing (NDT) can be utilized to analyze and design the crack and seat and rubblized pavements.

An FHWA study (FHWA 1987) suggested the use of crack and seat and overlaying as pavement rehabilitation alternative with caution, as both positive and negative effects of cracking and seating were identified during the study. It is indicated that the state agencies contemplating the use of break/crack and seat should do a thorough analysis to determine the most cost-effective rehabilitation technique to employ.

The main concern with break/crack and seat is the reduction in the structural capacity of the pavement. To compensate the reduction in structural capacity, thickness of the overlay can be increased; however, it increases the cost. In addition, study is needed to determine if the delay in reflective cracking actually extends the life of the pavement, compared to conventional overlays, and if it is cost-effective.

Rubblization

Rubblization of deteriorated asphalt pavements followed by HMA overlay is an excellent rehabilitation method that is equally effective for all types of PCC pavements. Rubblization is defined as “breaking the existing pavement into pieces and overlaying with HMA.” It destroys the slab action of the rigid pavements. This loss of structure must be accounted for in the HMA overlay design thickness (Galal et al. 1999). The sizes of the broken pieces usually range from 2 in (51 mm) to 6 in (152 mm) (APA 2003). Rubblized PCC pavement behaves like a high-quality granular base layer. A study by NAPA indicated that strength of the rubblized layer is 1.5 to three times greater than a high-quality dense graded crushed stone base (PCS 1991).

In the recent past, considerable research has been done on rubblization. Rubblization is considered to be a viable, rapid, and cost-effective rehabilitation option for deteriorated PCC pavements. Rubblization has been used successfully on continuously reinforced concrete pavements (CRCP) having substantial deterioration in the form of punchouts and patching. It is considered to be more effective when a pavement has severe D-cracking, alkali-silica reaction cracking, freeze-thaw damage, faulting, and patching of more than 10 percent on the slabs. These

material properties deteriorate the pavement, thus leading to loss of its structural integrity (Thompson 1999).

Performance of this technique varies from place to place and from project to project. The variation is due to factors such as the condition of the existing PCC pavement, type and level of distress, type of construction equipment, environmental conditions, traffic, and type and thickness of HMA overlay. Thompson (1999) evaluated the performance of an HMA overlaid rubblized PCC pavement and concluded that the pavement has retained its structural capacity and integrity.

Thompson et al. (1997) compared an HMA overlaid rubblized pavement section with an HMA overlay over an unfractured slab with extensive patching and found that the deflections produced during FWD evaluation were less in the rubblized section. Also, all the rubblized pavement test sections were found to be uniform showing a coefficient of variation (COV) less than 20%.

Michigan Department of Transportation analyzed the performance of rubblized pavements and indicated that the average service life of rubblized pavements is approximately 14 years, versus the original design life of 20 years. This poor performance of rubblized sections is attributed to the process of rubblization, rubblizing equipment, and weak base or subgrade soil.

Rubblization can be detrimental when the underlying soils are saturated. Installation of edge drains prior to rubblization has proven to be successful for this type of condition. If the existing concrete pavement is deteriorated due to the poor subgrade support, then rubblization may not be a viable option.

The rubblization process proved to be a viable alternative for the project conducted in Mills County in Iowa during 1989. The existing pavement exhibited severe failure and low structural rating numbers. Many of the rubblized test sections were found crack-free even after 5 years. The use of edge drains was encouraged in this project.

Rubblizing Equipment

In general, two types of equipment are used in the rubblization process: Resonant Breaker and Multiple-Head Breaker. The rubblization procedure plays an important role in long-term performance of the pavement.

Resonant Pavement Breaker (RPB)

The Resonant Pavement Breaker (RPB) uses vibrating hammers to demolish the existing pavement. This system breaks the concrete slab and destroys the bond between the concrete and the steel. It works on the principle that the frequency of a vibratory force can be varied until the resonant frequency of the body being vibrated can be determined. It is composed of a shoe (hammer) located at the end of pedestal, which is attached to a shaft, and a counterweight, which is situated on the top of the beam. The machine is capable of producing low amplitude (varying from 1.25 in [32 mm] to 1.5 in [38 mm]) blows with a force of 2000 lbs (0.91 tons) and

delivering blows to the existing PCC surface at a rate not less than 44 cycles per second (Roberts et al. 1996). Several variables affect the rubblization process, including the shoe size, beam width, operating frequency, and loading pressure.

This machine is not being used very often in recent years. Numerous passes are needed to cover the full-lane width of pavement, and if the spacing is too large, unbroken strips of concrete may remain. A second pass over a completely rubblized area would cause more damage to the pavement. Shoving, distortion, or punching may occur if the combined thickness of the rubblized PCC pavement and subbase and subgrade conditions at the time of construction are not adequate to support multiple passes by RPB (Thompson et al. 1997).

Multiple-Head Breaker (MHB)

The Multiple-Head Breaker (MHB) is of self-contained and self-propelled type, which is capable of rubblizing the pavement over a minimum width of thirteen feet per pass. The hammers used by this breaker are mounted laterally in pairs with half of the hammers in the forward row and the remainder diagonally offset in rear row. This spacing ensures continuous breakage from side to side. The lift height of the hammer can be adjusted independently. MHB damages the subgrade when its forceful crushing procedure impacts the concrete and pushes it into the subbase or subgrade. MHB eliminates the multiple passes and subgrade stability limitations (Thompson et al. 1997).

It should be noted that both these procedures could affect the subgrade strength properties. Instead of providing a uniform base, both these equipments damage the subgrade. This condition should be taken into account during the design of the overlay thickness.

Structural Evaluation

The primary concern in the design of crack and seat and rubblization is to select a procedure that is effective in controlling reflective cracking. The structural response and behavior of the PCC layer depends to some extent on the construction procedure. The structural effectiveness of the PCC layer must be estimated a priori, as the HMA overlay thickness has to be established before construction. The estimating process should consider the following factors (Thompson 1999):

1. Condition of the existing pavement
2. Presence of the steel reinforcement
3. Thickness, nature, and quality of the underlying base materials
4. Subgrade soil properties
5. Procedure to be used
6. Specified PCC slab segment size

Non-Destructive Testing (NDT)

Non-destructive testing can be used in the evaluation of a rubblized PCC pavement. Non-destructive testing uses Falling Weight Deflectometer (FWD), Ground Penetrating Radar (GPR),

Rolling Weight Deflectometer (RWD), and seismic techniques. FWD test is the commonly used procedure for the evaluation of HMA overlaid concrete pavements.

The NDT deflection measurements will be influenced depending on the application of load points. If NDT is conducted on the surface of the cracked or rubblized slab, the deflection sensors may not be properly seated on the irregular surface. Thus, to achieve accurate and reproducible deflection measurements, NDT has to be conducted on the PCC slab after placing an overlay (Thompson 1999). The AC layer provides a smooth and uniform surface for NDT load application and deflection sensor seating.

Applications of NDT include the following (Bush and Baladi 1989):

1. Back-calculation of pavement layer moduli and determination of structural capacity of the pavement section by measuring the pavement surface deflection under an applied dynamic load.
2. Evaluation of load transfer efficiency at joints in jointed concrete pavements.
3. Determination of the rate of deterioration of the pavement section and, hence, determining the critical time of the pavement structure.
4. Assessing the need for and designing the thickness of an overlay.
5. Determining the location and extent of voids in the pavement structure.
6. Analyzing the effects of heavier axle load and higher tire pressure on the remaining life of the pavement structure.

It is essential to know the behavior of the pavement structure and interaction of various pavement layers under moving loads; hence, the need for standardization of test procedures and test locations relative to various pavement lanes and pavement joints, data reduction and analysis for the purpose of back-calculating pavement layer moduli, and comparing the results obtained by using different NDT devices were realized.

Falling Weight Deflectometer

Falling Weight Deflectometer (FWD) has become the standard equipment for evaluation of a pavement due to its accuracy with which it can measure the deflected shape of a loaded pavement at appropriate rates of loading. It is utilized in the evaluation process of crack and seat and rubblized pavements.

The FWD test is conducted by applying dynamic (impulse) loads to the pavement surface, similar in magnitude and duration to that of a single heavy moving wheel load (see Figure 2). The response of the pavement system is measured in terms of vertical deformation or deflection over a given area using seismometers (geophones). It is used for conventional and deep strength flexible, composite, and rigid pavement structures. Data obtained from the FWD test help in understanding the effects of seasonal variations on pavement response.

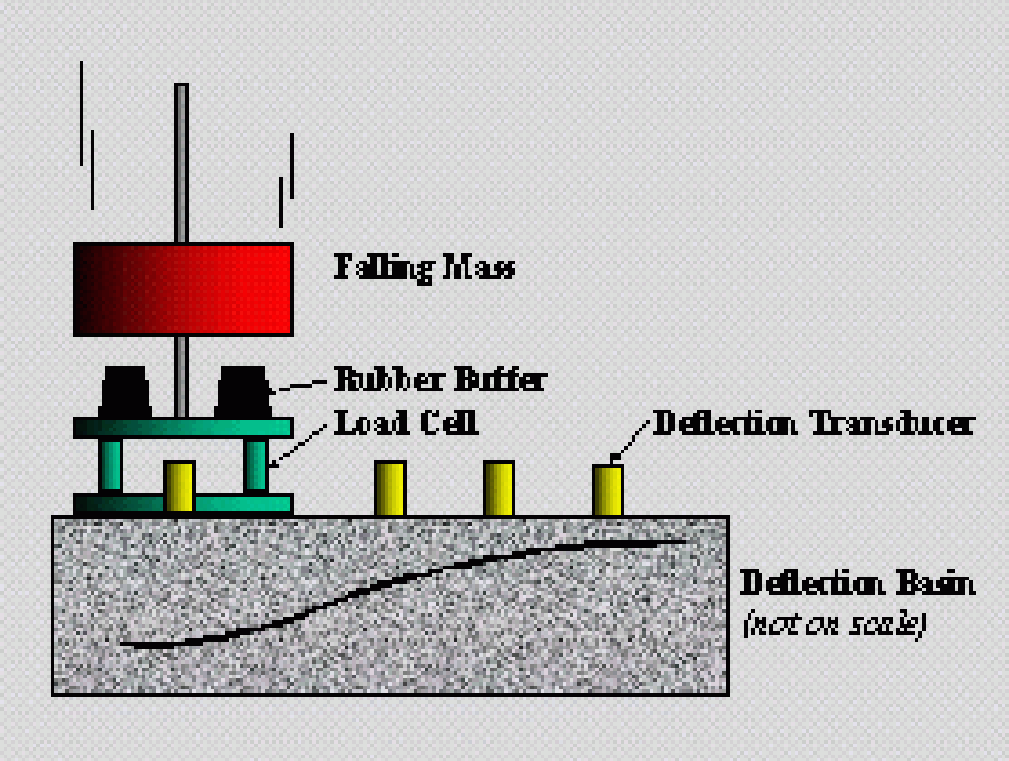

Figure 2. Schematic representation of FWD

The structural properties of the concrete pavement are completely altered after cracking or rubblization. Hence, the structural properties obtained before the PCC pavement was fractured cannot be used to design the thickness of the HMA overlay. Bemanian and Sebaaly (1999) indicated that deflections obtained after placing the leveling course provided more consistent overlay thickness compared to deflections taken on the cracked and seated or rubblized surfaces. As the deflection sensors cannot be properly seated on the irregular surface of a rubblized layer, accurate results cannot be attained.

Falling weight deflectometer can be used for various functions:

- Evaluate pavement condition
- Identify effects on pavement condition
- Monitor effectiveness of rehabilitation efforts

Pavement properties are back-calculated from the observed dynamic response of the pavement surface to an impulse load (the falling weight). A disadvantage of the FWD method is that its results are often dependent on factors such as the particular model of tester used, specific testing procedure, and the method of back-calculation.

Pavement Design Methods

Flexible Pavements

Flexible pavements were initiated during the 1870s in the United States (Asphalt Institute 1989). These pavements consist of a thin bituminous or asphalt wearing surface built over an aggregate base or subbase course, which rests upon the subgrade. Modern flexible pavements generally comprise a relatively thick series of asphalt layers on a prepared subgrade and are usually referred to as "full-depth."

Prior to early 1920s the thickness design of pavement layers was dependent purely on experience. Later on, various empirical methods have been developed. Empirical methods were used with or without strength test. The empirical method with strength test was initiated during 1929 by the California Highway Department. However, the disadvantage of this method is that it can be applied only to a given set of environmental, material, and loading conditions. The culmination of the empirical approach was the design method derived from the AASHO Road Test conducted during 1958-1961. This design method is still commonly used in pavement design by various state agencies.

With development in design methodologies, flexible pavements were analyzed using Burmister's layered theory, which assumes that the layered system is infinite in aerial extent. This theory is valid only for flexible pavements due to the limited area of stress distribution through flexible materials, which cannot be the case in rigid pavements. Practical application of Burmister-based design is still limited to only some states, such as Michigan.

Rigid Pavements

Rigid pavements usually consist of PCC as a wearing surface (slab), and base or subbase course may or may not be used. They were first built in Bellefontaine, Ohio, in1893. Base courses in PCC pavements are generally used for the following reasons: (a) control of pumping, (b) control of frost action, (c) control of shrink and swell of the subgrade, and (d) drainage. PCC pavements are much stiffer than asphalt pavements and distribute the load over a much wider area. Existence of joints makes layered theory inapplicable for analysis of PCC pavements; hence, rigid pavements are analyzed by the plate theory or Westergaard theory.

The analysis of plate theory assumes the concrete slab to be a medium thick plate, which is plane before bending and remains plane after bending. Flexural stress in the concrete is considered to be the major parameter in the design of PCC pavements.

Westergaard's analysis is based on extensive theoretical studies on the stresses and deflections in concrete pavements. The different loading conditions considered in this analysis are (a) load applied near the corner of the large slab, (b) load applied near the edge of the large slab but at a considerable distance from any corner, and (c) load applied at the interior edge of the large slab at a considerable distance from any edge (Huang 2003).

Composite Pavements

Composite pavements are composed of both HMA and PCC. This combination results in an ideal pavement if the PCC is used as the base layer and HMA as an overlay. These types of pavements are very expensive and generally result from pavement rehabilitation (Huang 2003).

Plate theory is used for the design of the concrete pavements if asphalt overlay is placed over PCC, as the major load-carrying component is the PCC layer. If the wheel load is applied near the pavement edge or joint, only plate theory can be used. If the wheel load is applied in the interior of the pavement, either layer theory or plate theory can be used (Huang 2003).

A major disadvantage of asphalt overlaid PCC is the reflective cracking which was discussed in detail in the previous section. Several techniques for controlling reflective cracking include fractured slab techniques, sawcut and sealing, asphalt-rubber interlayer, paving fabric interlayer, and crack relief layer between the overlay and the underlying base layer. As mentioned earlier, amongst all the techniques, the fractured slab techniques have proven to be consistently useful in eliminating reflective cracking.

However, selection of an appropriate design procedure for HMA overlaid fractured PCC slabs is very difficult due to its complex structure. It is clear that when the PCC pavement is cracked, it behaves more like a flexible pavement rather than rigid pavement.

Recent field-testing of different rubblized and crack and seat projects indicates a wide range in back-calculated modulus values (AASHTO 1993). For rubblized projects, they varied from less than 10,000 psi (69 MPa) to several hundred thousand psi, with coefficients of variation as much as 40% within a project. For crack and seat projects, it varied from a few hundred thousand psi to few million psi, with a coefficient of variation more than 40% within a project. PCS/LAW (PCS 1991) recommends that to avoid reflection cracking, no more than five percent of the fractured slab have a modulus greater than 1 million psi (6.9 GPa).

The objective of this project is to develop a ME design approach for the design of HMA overlaid fractured PCC slabs. In the ME design, the tensile strain at the bottom of HMA layer is used to consider HMA fatigue and the vertical compressive strain on the surface of subgrade is used to consider rutting.

DESIGN METHODS

The most important aspect of design procedure is to characterize the rubblized concrete layer. The biggest challenge in the structural design of rubblized pavements is to determine the appropriate HMA overlay thickness, which satisfies both the functional and structural requirements of the pavement. Several approaches have been proposed to establish the required overlay thickness. Currently, the three most important overlay design methods used are the American Association of State Highway Transportation Officials design method (AASHTO 1993), the effective thickness design method, and deflection method. Of these, the most recognized overlay design procedure is the AASHTO overlay design for fractured slabs. It uses an empirical procedure, based upon the results of the AASHO (American Association of State Highway Officials) Road Test. The modern approaches used in the overlay design are mechanistic and mechanistic-empirical design.

Current Design Methodologies

Empirical Design

The empirical design approach requires a number of observations to be made in order to estimate the relationships between input variables and outcomes (performance). The relationships between design inputs and pavement failure are obtained based on experience, experimentation, or a combination of both. They can range from extremely simple to complex. The main disadvantage of an empirical design method is that it can be applied only to a given set of environmental, material, and loading conditions.

The AASHTO Guide for Design of Pavement Structures (1993) uses an empirical procedure, based upon the results of the AASHO (American Association of State Highway Officials) Road Test, Ottawa, Illinois (1958-1961).

AASHTO Design method (1993)

To calculate the overlay thickness, both the AASHTO Component Layer Analysis and the nondestructive testing methods are used. Both of these methods use the concept of structural number (SN). Structural number was developed to provide a single number to represent a "conceptual" pavement thickness. The SN comprises the structural contribution of each layer, using a layer coefficient and thickness, where the layer coefficient is a measure of relative stiffness ($SN = a1t1 + a2t2 + a3t3 + \ldots$).

<u>AASHTO Non-Destructive Testing Method</u>

This testing method is relatively simple and uses the state-of-the-art nondestructive testing of the pavements. According to the research conducted by Nevada Department of Transportation (NDOT) (Sebaaly et al. 1996), the AASHTO non-destructive testing method produced unreliable

recommendations on all three projects analyzed. The following is a brief description of design method:

1. Determine the required structural number (SN) to carry future traffic.
2. Evaluate the effective structural number for the existing pavement. This is evaluated on the basis of effective modulus of all pavement layers and the effective subgrade modulus. Both of these values are calculated using the FWD deflections data.
3. Determine the needed additional structural number that must be provided by the overlay as the difference between the required SN and effective SN.
4. Determine the required thickness of the overlay using the layer coefficient for overlay material.

AASHTO Condition Survey Method

The most critical step of this method is the selection of layer coefficients, which requires a great deal of experience. According to the research conducted by NDOT (Sebaaly et al. 1996), AASHTO condition survey method has produced reliable recommendations on all three projects analyzed. However, the design engineer must have experience with this method before its full implementation. The following is a brief description of design method:

1. Determine the required structural number (SN) to carry future traffic.
2. Evaluate the effective structural number for the existing pavement. This is done by assigning layer coefficients for each layer on the basis of the PMS and condition survey data and using the thickness of the individual layers.
3. Determine the needed additional structural number that must be provided by the overlay as the difference between the required SN and effective SN.
4. Determine the required thickness of the overlay using the layer coefficient for overlay material.

A major advantage of this method is that it evaluates the structural, as well as the functional, distress.

The AASHTO pavement design procedure requires estimating the layer coefficients. According to 1993 AASHTO guide, the recommended coefficients for rubblized PCC pavement range from 0.14 to 0.30 (Thompson 1999). Study conducted by Indiana DOT indicated that a layer coefficient of 0.22 represented a conservative value to ensure structural adequacy with similar conditions (Galal et al. 1999).

The AASHO Road Test

Various state highway officials attempted to provide adequate facilities to meet the demands of increasing traffic number, size, and speed. The AASHO Road Test was the first of its kind with a total investment of $27 million. It was conceived and sponsored by the American Association of State Highway Officials (AASHO) in 1961.

The AASHO Road Test was conducted on a pavement section located northwest of Ottawa, Illinois, about 80 miles southwest of Chicago. The test studied portland cement concrete pavements, flexible pavements, as well as short-span bridges. The main objective of this test program was to relate design to performance under controlled loading conditions.

Layout of the Project

The test facilities were constructed as six different loops. There were four major loops (loops 3 through 6) and two smaller loops (loops 1 and 2). Four major loops (3 through 6) were constructed for testing with tractor semi-trailer type traffic, loop 2 for testing with light truck traffic, and loop 1 for testing with static, creep-speed, and vibrating loads and for observations of effects of time and weather with no traffic.

The schematic diagram of loops 5 and 6 in the AASHO Road Test are shown in Figure 3. Each loop was a segment of a four-lane divided highway, with parallel roadways, or tangents, connected by turnarounds at each end. The pavement on the north tangent and east turnaround of each loop was surfaced with HMA consisting of a subbase and base. The pavements on the south tangent and west turnaround of each loop were surfaced with PCC consisting of a subbase. Each tangent was constructed as a succession of pavement sections called structural sections. The structural sections in each loop had different designs and, in most of them, designs were varied by changing the design thickness of the component layers of material. The minimum length of a section was 100 ft (30.5 m) in loop 2 through 6 ft (1.8 m) and 15 ft (4.6 m) in loop 1.

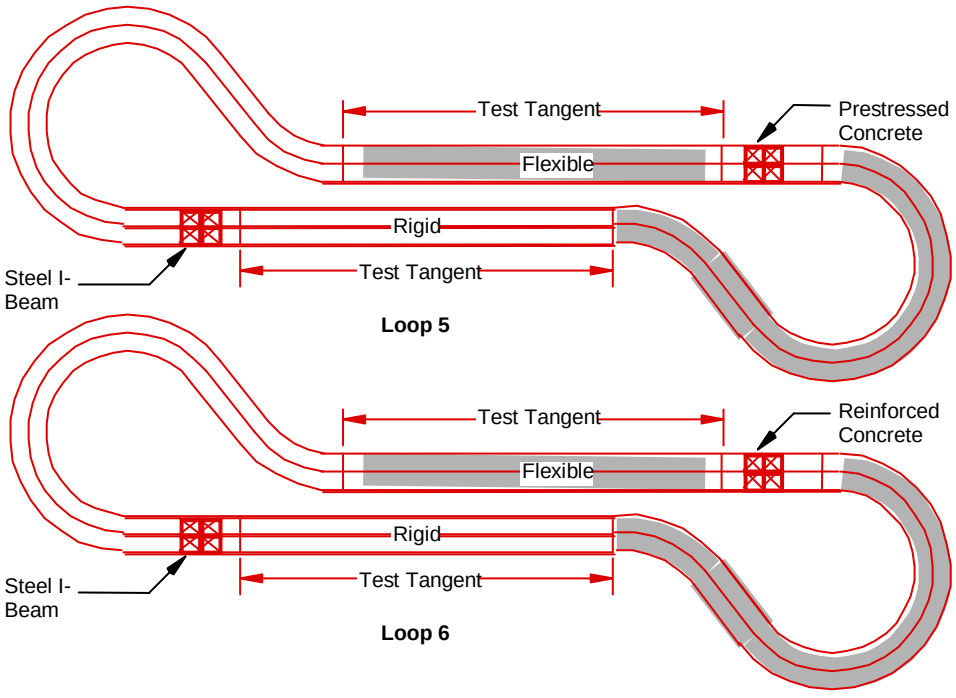

Figure 3. AASHO Road Test layout—loops 5 and 6 (Hotmix Database 2004)

The specific objectives of the AASHO Road Test related to the pavement research stated by National Advisory Committee in April 1957 were the following:

1. To determine the significant relationships between the number of repetitions of specified axle loads of different magnitude and the arrangement and performance of different thicknesses of uniformly designed and constructed asphaltic concrete, plain PCC, and reinforced PCC on different thicknesses of bases and subbases when on a basement soil of known characteristics.
2. To make special studies dealing with such subjects as paved shoulders, base types, pavement fatigue, tire size and pressures, and heavy military vehicles, and to correlate the findings of these special studies with the results of the basic research.
3. To provide a record of the type and extent of effort and materials required to keep each of the test sections or portions thereof in a satisfactory condition until discontinued for test purposes.
4. To develop instrumentation, test procedures, data, charts, graphs, and formulas which will reflect the capabilities of the various test sections and which will be helpful in future highway design, in the evaluation of the load carrying capabilities of existing highways, and in determining the most promising areas for further highway research.
5. To develop a pavement “serviceability index” to estimate the serviceability ratings corresponding to average rating panel determinations. The measurements, which were combined to determine the serviceability index, were all related to condition of the pavement surface. Those measurements included longitudinal profile in the wheel paths, transverse profile (rut depth), cracking, and area of patching. This was the first use of a functional “performance” measure in pavement technology.

The basic deficiencies of the AASHO Road Test are as follows:

1. Short duration of the road test did not allow an evaluation of the effect of surface ageing on pavement performance.
2. The road test was limited to a single subgrade condition and environment.
3. The road test did not incorporate pavement features and materials, which have since become or are becoming standard.
4. The truck loading applied at the road test did not include tridem or quadrum axles, "super single” tires, or the relatively high truck tire pressures now prevalent.
5. The AASHO Road Test did not address the maintenance and rehabilitation sections of the pavement.

Some basic assumptions are needed in order to apply the empirical equations derived from the AASHO Road Test:

1. Loading can be applied to mixed traffic by reducing mixed traffic to conceptually equivalent standard axle loads (ESALs).
2. The characterization of subgrade support may be extended to other subgrade soils by an abstract soil support scale.
3. Material characterizations may be applied to other surfaces, bases, and subbases by assigning appropriate layer coefficients.
4. The accelerated testing done at the AASHO Road Test can be extended to a longer design period.

It should be noted that AASHO Road Test did not include overlays. Thus, the empirical equations derived cannot be used for the design of overlays.

Effective Thickness Approach

The basic concept of this method is that the required thickness of the overlay (h_{OL}) is the difference between the thickness required for a new pavement (h_n) and the effective thickness (h_e) of the existing pavement:

$$h_{OL} = h_n - h_e \quad (1)$$

where h_{OL} is the thickness of the overlay, h_n is the thickness of the new pavement, and h_e is the effective thickness of the existing pavement (Huang 2003).

As this approach is based on the type, condition, and the thickness of each component layer, this method is also called component analysis procedure. If the overlay is HMA, all thicknesses in above equation are expressed in terms of HMA. If the overlay is PCC, all thicknesses are expressed in terms of PCC.

Deflection Approach

The deflection approach is based on the empirical relationship between the pavement deflection and the overlay thickness. It has been observed that the performance of the AC pavement is related to the maximum pavement deflection. The data that was obtained from the WASHO, AASHO, and British Road Tests showed that the amount of traffic that can be placed on an AC pavement is related to the deflection level (Kingham 1969). The larger pavement surface deflections imply weaker pavement and subgrade (shorter pavement life) and, thus, require thicker overlays. The overlays must be thick enough to reduce the deflection to a tolerable amount. This method has been used by the Asphalt Institute, the California Department of Transportation, Utah, Texas, the Roads and Transportation association of Canada, and the Transport and Road Research Laboratory of Great Britain (Kennedy and Lister 1978).

The deflection approach is a semi-mechanistic approach in which an indirect measure of the critical pavement response, the deflection, is related to the pavement performance to determine the required overlay thickness. Deflection approach is only capable of providing valid results for the exact same type of pavement structure that the performance model is based on.

Modern Overlay Design Methods

Overlay design is a complicated process and requires various types of data. But these data might not be readily available. Different agencies use different methods for the design of overlays. Usually, the procedure for the design of the overlay is similar to that for new pavement, except that the condition or remaining life of the existing pavement at the time of overlay is taken into

consideration (Huang 2003). The methods used for the design of overlays include mechanistic and mechanistic-empirical approach.

Mechanistic Design

The mechanistic design approach is based on the assumption that a pavement can be modeled as a multi-layered elastic or visco-elastic structure on an elastic or visco-elastic foundation. Stress, strain, and deflection of pavement structure are analyzed in the design. This design accounts only for the structural capacity of the pavement.

The elastic and visco-elastic terms refer to whether or not strain is recovered after loading—in an elastic system, no permanent deformation occurs, and in a viscous system, permanent deformation occurs after the load is released. By assuming that the pavements can be modeled as above, stress, strain, or deflection at any point within or below the pavement can be calculated using structural analytical models. However, mechanistic design does not include a number of factors that influence the pavement performance. Thus, there is a need of empirical correlations to model the pavement. This combination of mechanistic design methods with empirical methods is referred to as mechanistic-empirical design.

The HMA overlay thickness design methodology used in the state of Iowa is purely empirical. Since 40 years after the development of empirically based pavement design procedures of AASHO Road Test, traffic volumes have outgrown. Furthermore, the AASHO Road Test was based on one environmental region, geological formation, and on one vehicle type. Traffic volumes and truck axle weights increased dramatically, and it became questionable if the designs seen today are realistic. Thus, there is a need for mechanistic-empirical methods, which are more realistic and reliable.

Mechanistic-Empirical Design

The mechanistic-empirical (ME) design methods are based on the mechanics of materials that relate an input, such as wheel load, to an output of pavement response (physical phenomena), such as stress or strain (Huang 2003). The pavement response values are used to predict distress from the laboratory test and field performance data.

The major components of the ME procedure are inputs, structural models, (i.e., the “mechanistic analysis”), transfer functions, (i.e., the empirical relationships relating structural responses to performance), and reliability. It contains a number of mechanistic distress models that require careful calibration and verification to ensure satisfactory agreement between predicted and actual distress values.

Mechanistic-empirical approach for design of overlays is similar to that of design of new pavements. This method requires the determination of critical stress, strain, or deflection in the pavement by some mechanistic methods and the prediction of resulting damages by some empirical failure criteria. Prior to the thickness design, remaining life of the existing pavement must be evaluated. Based on the condition of pavement or remaining service life, thickness of the

overlay is determined so that the damages in either the existing pavement or the new overlay will be within the allowable limits.

The most frequently used failure criteria for the design of flexible pavements are fatigue cracking and permanent deformation. If the existing pavement has remaining fatigue life, the following procedure can be used:

$$\sum_{i=1}^{m} \frac{n_i}{N_i} < 1 \tag{2}$$

where n_i is the actual number of load repetitions for the ith load group, N_i is the allowable number of load repetitions for the ith load group, and m is the number of load groups (Huang 2003).

If the existing pavement has no remaining fatigue life, the overlay should be considered as the top layer of a two-layer system with a modulus of subgrade depending on the conditions of the existing pavement.

Stress-dependent finite element programs (such as ILLI-PAVE and MICH-PAVE) and elastic-layer programs (such as BISAR, KENLAYER, CHEVRON, ELSYM 5, and CIRCLY) are recommended for the analysis of flexible pavements. While finite element programs are considered to be more versatile, they are much more cumbersome for use by designers. Transfer functions relate the pavement performance as measured by the type and severity of distress (rutting, cracking, roughness, etc.) to structural responses. Shift factors are used with various transfer functions to adjust predicted distress development to more realistically reflect the field-observed pavement performance (Thompson 1996). The most common flexible pavement transfer functions are as follows:

1. Horizontal tensile strain on the HMA layer: fatigue life algorithms
2. Vertical compressive strain on the subgrade: rutting in the pavement
3. Permissible subgrade stress ratios for various ESALs
4. Surface deflection: pavement life relations

The relationship between the output and the input is typically described using a mathematical model. The most commonly used mathematical model is a layered elastic model. The relationship between them can be described by empirically derived equations that compute the number of loading cycles to failure.

The following are the various advantages of mechanistic-based pavement design procedure:

1. It provides more reliable and realistic design.
2. It has an ability to predict the type of distress.
3. It can be used for both existing pavement rehabilitation and new pavement construction.

4. It accommodates changing load types, environmental, and aging conditions.
5. It uses material properties which relate better to actual pavement response.
6. It can better characterize materials allowing for the following:
    a. Accommodation of new materials and utilization of available materials
    b. An improved definition of existing layer properties.

Failure criteria related to a specific type of distress must be established. In the design of HMA overlaid pavements, fatigue cracking, rutting, and temperature cracking are the three principal types of distress to be considered. The other failure criteria found recently is top-down cracking. This is not considered in the overlay design as its origin is still unclear and research is yet to be conducted in detail about its effects.

Fatigue Cracking

Fatigue cracking is produced due to the horizontal tensile strain developed at the bottom of the HMA overlay. The allowable number of load repetitions is related to the tensile strain at the bottom of the HMA layer. Miner's (1945) cumulative damage concept has been widely used to predict fatigue cracking.

Transfer functions, which relate the HMA tensile strains to the allowable number of load repetitions, differ from one design method to other. In the Asphalt Institute and Shell design methods, the allowable number of load repetitions N_f to cause fatigue cracking is related to the tensile strain ε_t at the bottom of the HMA and to the HMA modulus E_1, as shown in Equation 3:

$$N_f = f_1 (\varepsilon_t)^{-f_2} (E_1)^{-f_3} \quad (3)$$

where the coefficient f_1 and exponents f_2 and f_3 differ for both methods.

For the standard mix used in design, the Asphalt Institute (1981) equation for 20% of area cracked is as follows:

$$N_f = 0.0796(\varepsilon_t)^{-3.291} (E_1)^{-0.854} \quad (4)$$

The Shell fatigue equation is expressed as follows:

$$N_f = 0.0685(\varepsilon_t)^{-5.671} (E_1)^{-2.363} \quad (5)$$

In a research conducted at the University of Illinois in 1988, an ILLI-PAVE full-depth HMA database was analyzed to develop a relation between the FWD deflection parameter called Area Under Pavement Profile (AUPP) and tensile strain (ε_{AC}) at the bottom of the HMA layer (Thompson 1999):

$$\text{Log } \varepsilon_{AC} \text{ (microstrain)} = 1.001 + 1.024(\text{Log AUPP [inches]}) \quad (6)$$

Figure 4 shows a schematic representation of AUPP. The AUPP FWD data for HMA overlays over rubblized PCC pavements can be used to estimate ε_{AC} without using back-calculation and structural modeling procedures. For HMA thicknesses greater than 5–6 in (125–150 mm), HMA modulus and HMA thickness are the major factors that influence AUPP and ε_{AC}. For full-depth asphalt and conventional flexible pavements, AUPP is relatively insensitive to base-subbase-subgrade conditions. Through a fatigue design algorithm, the fatigue life can be predicted using the estimated HMA strain.

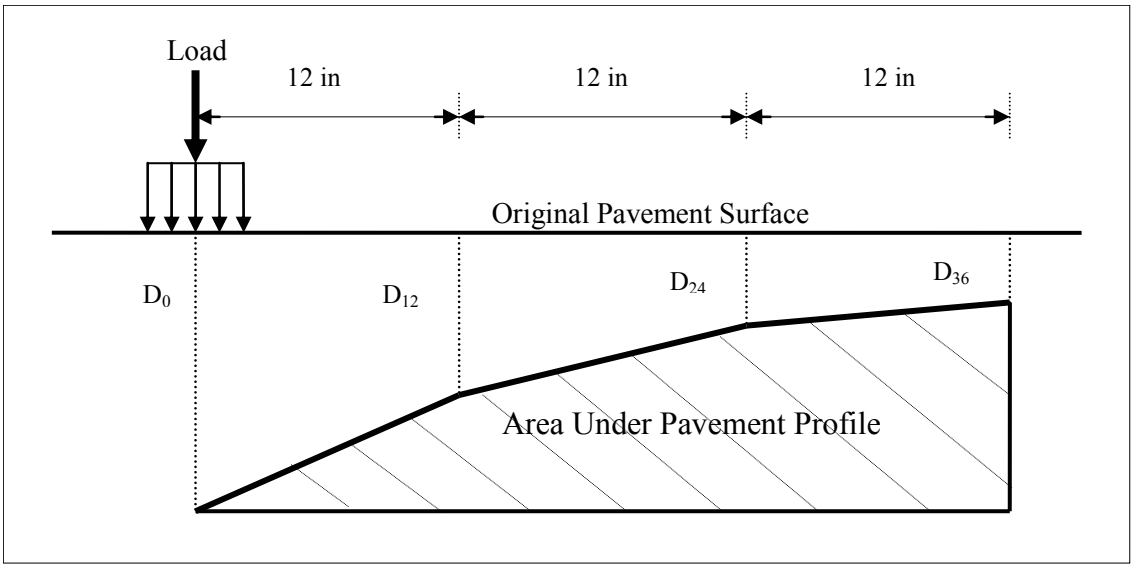

Figure 4. FWD AUPP deflection basin parameter (1 in = 25.4 mm) (Thompson 1999)

Rutting

Rutting occurs only on flexible pavements due to permanent deformation of any pavement layer caused by repeated high vertical compressive strain on top of the subgrade, whereas surface layer rutting is considered as a material-related problem. Two design methods have been used to limit rutting: one to limit the vertical compressive strain on the subgrade and the other to limit the total accumulated permanent deformation on the pavement.

In the Asphalt Institute and Shell design methods, the allowable number of load repetitions N_d to limit rutting is related to the vertical compressive strain ε_c on the top of the subgrade, as shown in Equation 7 (Huang 2003):

$$N_d = f_4 (\varepsilon_c)^{-f_5} \quad (7)$$

where the coefficient f_4 and exponent f_5 differ for both methods.

Flow-Chart for Mechanistic-Empirical Thickness Design

In Figure 5, a flow chart of the ME design method used in the determination of thickness of the HMA overlay is presented. In the ME design procedure, the pavement is regarded as a multi-layered elastic system. The materials in each of these layers are characterized by modulus of elasticity (E) and Poisson's ratio (μ). Material characterization of the pavement is performed using the FWD data. Poisson's ratio is customarily assumed for design within reasonable accuracy without any major effect on the pavement response to loading.

Based on engineering judgment, thickness of HMA overlay is assumed after material characterization. Pavement responses include stresses, strains, and deflections. Tensile stress at the bottom of the HMA overlay and the vertical compressive strain on the top of the subgrade are calculated using programs such as 4LIP, KENLAYER, etc. Surface deflections can be easily measured using the FWD. Pavement responses are related to various types of distresses through the distress models, also called the transfer functions. According to Thompson (1996), transfer functions are the weak link in the ME design method. The amount of damage is expressed as a damage ratio between the predicted and the allowable number of load repetitions. Critical damage occurs when the sum of damage ratios reaches a value of 1.0. The final design is selected when the assumed pavement thickness satisfies the design requirements for each type of distress. The following section discusses in detail the design inputs in the mechanistic-empirical thickness design of the pavement.

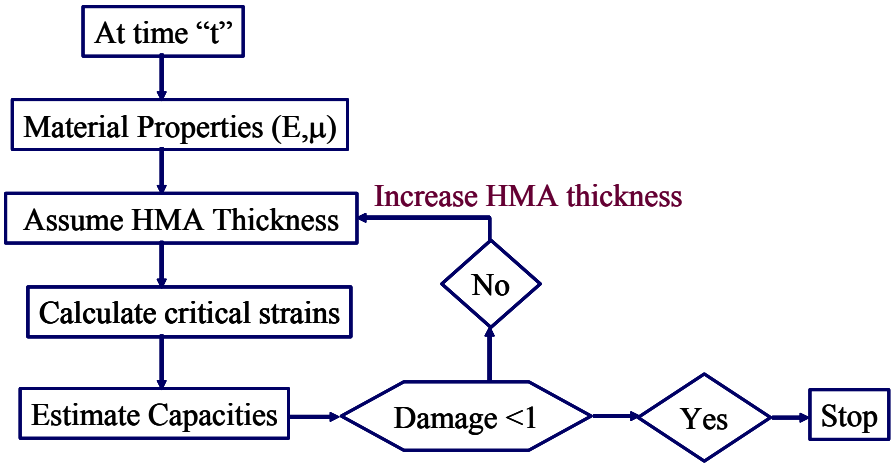

Figure 5. Flow chart for mechanistic-empirical HMA overlay thickness design

DESIGN INPUTS

Mechanistic design requires fundamental material properties and material failure criteria as a function of load and environmental effects. These variables provide reliable design if based on studies of the actual data. Design inputs are divided into three categories: traffic, material properties, and environmental factors.

Traffic and Loading

Traffic and loading are considered important factors in pavement design, which include axle loads, number of load repetitions, tire contact areas, and vehicle speeds. It is generally difficult to consider multiple wheel loads such as tandem or tridem axles. Hence, an equivalent single axle load is often used in design. If the wheel spacing is very large in the multiple axles, there is no significant effect on the pavement design. The critical tensile and compressive strains encountered in this case are slightly different from that of the single axle. The design becomes conservative if each axle load is treated independently and considered as one repetition. The design may be unsafe if the tandem and tridem axles are treated as a group and considered as one repetition.

Figure 6 depicts the schematic representation of a moving wheel load. Axle load is assumed to be uniformly distributed over the contact area. Thus, it is necessary to know the contact area between tire and pavement.

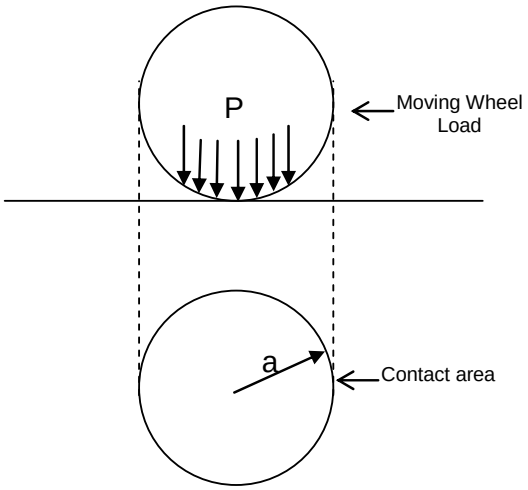

Figure 6. Schematic representation of a moving wheel load and its contact area

In pavement design, the contact pressure is generally assumed to be equal to the tire pressure. As heavier axle loads have excess tire pressures and have more destructive effects on pavements, the use of tire pressure as the contact pressure is on the safer side (Huang 2003). In the Visual Basic program developed as a part of this research, a contact pressure (p) of 80 psi and a contact radius (a) of 2.33 in. (5.91 cm) are used.

Effects due to traffic include considerations of various vehicle types expected to be encountered, anticipated number of movements of each vehicle type, and lateral wander effects of vehicles over a design period (Yoder and Witczak 1975).

Design Procedures

There are three different procedures for considering effects of traffic on the pavement design: (a) fixed traffic, (b) fixed vehicle, and (c) variable traffic and vehicle.

Fixed Traffic

In the fixed traffic procedure, the thickness of pavement is governed by a single wheel load, and the number of load repetitions is not considered as a variable. Thus, if the pavement is subjected to multiple wheels, they must be converted to an equivalent single wheel load (ESWL). This procedure is often used in design of airport pavements or highway pavements with heavy wheel loads but light traffic volume (Huang 2003).

Fixed Vehicle

In the fixed vehicle procedure, thickness of the pavement is governed by the number of load repetitions by a standard vehicle, usually the 18 kip (80 kN) single axle load. Single, tandem, or tridem axles must be converted to an 18 kip (80 kN) single axle load by an Equivalent Axle Load Factor (EALF). EALF depends on the failure criterion developed. Typically, EALF is determined using empirical equations derived from the AASHO Road Test (Huang 2003). For a truly mechanistic design method, each load group is considered individually instead of equivalent single axle loads.

The number of repetitions under each single, tandem, or tridem axle loads must be multiplied by its EALF to obtain the equivalent effect based on an 18-kip (80 kN) single axle load. A summation of the equivalent effects of all axle loads during the design period results in an Equivalent Single Axle Load (ESAL).

Variable Traffic and Vehicle

In the variable traffic and vehicle procedure, both the traffic and vehicular effects are considered individually. There is no need to assign an equivalent factor for each axle load. Traffic loads can be divided into number of groups, and stresses, strains, and deflections under each load group can be determined separately and used for design purposes (Huang 2003). This procedure is best suited for mechanistic method of design.

Traffic Analysis

To design a pavement, it is necessary to predict the number of repetitions of each axle load group during a design period, typically 20 years. The design procedures are based on cumulative

expected 18-kip (80 kN) ESAL. The traffic loading used in the design is due to the average traffic during the design period. The minimum traffic information required for the pavement design is the Average Daily Truck Traffic (ADTT) at the start of the design period. ADTT can be expressed as a percentage of Average Daily Traffic (ADT) or as an actual value (Huang 2003). The actual traffic data on the project can be collected using the weigh-in-motion scales. It can also be obtained from the W-4 form of a loadometer station that has traffic characteristics similar to those of the existing project.

In Iowa counties, traffic is generally estimated in the form of ADT and percentage of truck traffic. Using the available data, ESAL for the design lane can be calculated using the following equation:

$$\mathrm{ESAL} = \left(\sum_{i=1}^{m} p_i F_i\right)(\mathrm{ADT})_0(\mathrm{T})(\mathrm{A})(\mathrm{G})(\mathrm{D})(\mathrm{L})(365)(\mathrm{Y}) \tag{8}$$

where p_i is the percentage of total repetitions for the ith load group, F_i is the equivalent axle load factor (EALF) for the ith load group, $(ADT)_0$ is the average daily traffic at the start of the design period, T is the percentage of trucks in the ADT, A is the average number of the axles per truck, Y is the design period in years, G is the growth factor, D is the directional distribution factor, and L is the lane distribution factor.

Different agencies use different methods to obtain the growth factor. The Portland Cement Association (1984) uses the traffic at the middle of the design period as the design traffic:

$$\mathrm{G} = (1+\mathrm{r})^{0.5\mathrm{Y}} \tag{9}$$

where r is the yearly rate of traffic growth. In Table 1, the growth factors for 20- and 40-year design periods based on the above equation are presented.

Table 1. Traffic growth factors (Huang 2003)

Annual growth rate (%)	20-year design period	40-year design period
1.0	1.1	1.2
1.5	1.2	1.3
2.0	1.2	1.5
2.5	1.3	1.6
3.0	1.3	1.8
3.5	1.4	2.0
4.0	1.5	2.2
4.5	1.6	2.4
5.0	1.6	2.7
5.5	1.7	2.9
6.0	1.8	3.2

The Asphalt Institute (1981) and the AASHTO design guide (AASHTO 1986) recommended the use of traffic over the entire design period to determine the growth factor, as indicated by

$$\text{Total growth factor} = (G)\,(Y) = \frac{(1+r)^{Y} - 1}{r} \tag{10}$$

If the growth rate is not uniform, then different growth rates should be used for different load groups or types of vehicles.

According to the AASHTO 2002 Design Guide, the directional distributional factors (*D*) lie in the range of 0.5 to 0.6, except for vehicle class 5. The listed values below are computed using data from the LTPP traffic database:

- Vehicle class 4: buses—0.50, except for local and municipal bus routes. For local routes, it varies from 0.8 to 1.0
- Vehicle classes 5-7: single unit trucks—0.62. These types of trucks consistently have the greatest directional distributional factors.
- Vehicle classes 8-10: tractor-trailer trucks—0.55.
- Vehicle classes 11-13: multi-trailer trucks—0.50.

If the detailed site-specific or regional/statewide truck traffic data are unavailable, the truck directional distributional factor for the most common truck type (e.g., vehicle class 9) is suggested for use as the default value for all truck traffic.

The lane distribution factor (*L*) varies with the volume of traffic and the number of lanes. For two-lane highways, the lane in each direction is the design lane, so the lane distribution factor is 100%. For multilane highways, the design lane is the outside lane. For four lane highways with two lanes in each direction, the lane distribution factors range from 66% to 94%. For multilane highways with three or more lanes in each direction, the lane distribution factors range from 49% to 82%. The lane distribution factors by the Asphalt Institute are about the same as those by Portland Cement Association (PCA) for an ADT of 3,000 in one direction.

ESAL can be computed conveniently by combining the first and fourth terms of the Equation 8, as indicated by

$$\text{ESAL} = (\text{ADT})_0\,(T)(T_f)(G)(D)(L)(365)(Y) \tag{11}$$

$$\text{Truck factor } (T_f) = \left(\sum_{i=1}^{m} p_i F_i\right)(A) \tag{12}$$

Truck factor is the number of 18-kip single axle load applications per truck. The use of truck factor is very convenient when the design is based on the equivalent 18-kip single axle load. The number of axles for each load group, plus the number of trucks weighed, can be obtained from

the W-4 form. The sum of ESALs for all trucks weighed divided by the number of trucks weighed gives the truck factor.

The following design example is based on the Iowa DOT procedure for estimating the design ESAL. The Visual Basic program developed for this research uses the same procedure to determine the 20-year design ESAL.

Design Example

Given: Current AADT = 500, year = 20, AADT = 750, percent trucks = 10%

Select a "design year" AADT (about 75%-80% of the year 20 increase) - Say 700

Convert to trucks per day => 700 * 10% = 70 trucks per day
(*design year AADT * percent trucks*)

Select an appropriate ESAL factor => 0.40
(*0.40 for low volume, 0.45 for major collectors, and 0.50 for heavy truck routes*)

Compute ESALs per day => 70 * 0.40 = 28 ESALs per day
(*trucks per day * ESAL factor*)

Compute ESALs per year => 28 * 300 = 8400 ESALs per year
(*300 for low volume and 365 for high volume*)

Compute 20-year ESALs => (20 years)* 8400*20 = 168,000 $ESAL_{20}$

According to Iowa DOT's Superpave mix design, 20-year design ESALs (million) can be classified into four sections to obtain HMA mixture design level: (1) less than 0.1, (2) 0.1 to 0.3, (3) 0.3 to 1.0, and (4) 1.0 to 3.0.

For the above given problem, select HMA mixture design level of 100,000-300,000 ESALs.

Material Properties

In the mechanistic-empirical design, material properties must be specified in order to determine the responses of the pavement, such as stresses, strains, and deflections. They are of two categories: response properties and distress properties. Elastic modulus (E) and Poisson's ratio (μ) are the two response properties which are required to predict the state of stress, strain, and displacement within the structure. The distress properties are used through transfer functions to predict the major modes of distress associated with a particular material, such as fatigue, low-temperature cracking, permanent deformation of asphalt pavements, and repeated load fatigue and joint faulting of rigid pavements.

As pavement system is considered a multilayered elastic system, the elastic moduli and the Poisson's ratio of each layer must be specified. The Poisson's ratio values are reasonably

assumed as having relatively small effects on pavement responses. Typical values for Poisson's ratio are 0.40 for hot mix asphalt, 0.35 for rubblized PCC, and 0.40 for subgrade.

If the elastic modulus of a material varies with the time of loading, the resilient modulus must be selected in accordance with a load duration corresponding to the vehicle speed. The materials considered are asphalt mixtures for surface and base courses, bases and subbases, and subgrade soils.

Subgrade

The performance of a pavement system primarily depends on the performance of the subgrade. Thickness requirements for asphalt pavements depend on the strength of the subgrade to a large extent. Determination of subgrade resilient modulus (M_R) is essential for designing overlay thickness for existing pavement sections. Resilient modulus is defined as the ratio of the repeated deviator axial stress to the recoverable axial strain. If the design modulus value is too low, the thickness will be too conservative and uneconomical. If the design modulus value is too high, the thickness of the pavement layer will be insufficient. The resilient modulus of the subgrade (M_R) can be determined through back-calculation of nondestructive test (FWD) data, by performing laboratory testing, or by soil classification.

Non-Destructive Testing (FWD)

Hall and Mohseni (1991) described a simple procedure for back-calculation of AC/PCC pavement layer moduli developed from available closed form solutions. Closed-form solutions exist for back-calculation of PCC and subgrade moduli for slab-on-grade systems. This direct approach is not applicable for the analysis of AC overlaid PCC pavements as it does not account for the influence of the AC overlay on deflections. These solutions were used to back-calculate bare PCC pavement, with adjustments made to measured deflections to account for the influence of the AC layer.

For a bare PCC pavement, the PCC slab's elastic modulus (E_{pcc}) and the subgrade k value or elastic modulus (E_s) may be back-calculated from the maximum deflection d_0 and the AREA of the deflection basin (see Figure 4). AREA is defined by the following equation:

$$\text{AREA} = 6 * \left[1 + 2\left(\frac{d_{12}}{d_0} \right) + 2\left(\frac{d_{24}}{d_0} \right) + \left(\frac{d_{36}}{d_0} \right) \right] \tag{13}$$

where d_0 is the maximum deflection at the center of the load plate in inches, and d_{12}, d_{24}, and d_{36} are deflections at 12 in (305 mm), 24 in (610 mm), and 36 in (914 mm) from the plate center, respectively.

Ioannides et al. (1989) demonstrated that for a given load radius and sensor arrangement, a unique relationship exists between AREA and the "dense liquid" radius of relative stiffness (l_k) of the pavement, in which the subgrade is characterized by a k value (Westergaard 1939):

$$l_k = \left[\frac{E_{pcc} D_{pcc}^3}{12\left(1 - \mu_{pcc}^2\right)k} \right]^{1/4} \tag{14}$$

where l_k = dense liquid radius of relative stiffness (in), E_{pcc} = PCC Elastic modulus (psi), D_{pcc} = PCC thickness (in), μ_{pcc} = PCC Poisson's ratio, and k = k value (psi/in).

A separate unique relationship exists between AREA and the "elastic solid" radius of relative stiffness (l_e) of the pavement, in which the subgrade is characterized by an elastic modulus and Poisson's ratio (Losberg 1960):

$$l_e = \left[\frac{E_{pcc} D_{pcc}^3 \left(1 - \mu_s^2\right)}{6\left(1 - \mu_{pcc}^2\right)E_s} \right]^{1/3} \tag{15}$$

where l_e = elastic solid radius of relative stiffness (in), μ_s = subgrade poisson's ratio, and E_s = subgrade elastic modulus (psi).

The SAS (Statistical Analysis Software) was used to determine l_k or l_e as a function of AREA for each model by nonlinear regression:

$$l_k = \left[\frac{\ln\left(\frac{36 - AREA}{1812.279} \right)}{-2.559} \right]^{1/0.228} \tag{16}$$

$$l_e = \left[\frac{\ln\left(\frac{36 - AREA}{4521.676} \right)}{-3.645} \right]^{1/0.187} \tag{17}$$

The elastic modulus of the subgrade (E_s) may be obtained from Losberg's deflection equation (see Equation 15):

$$E_s = \left[\frac{2P(1 - \mu_s^2)}{d_0 l_e} \right] \left[0.19245 + 0.0272 * \left(\frac{a}{l_e} \right)^2 + 0.0199 \left(\frac{a}{l_e} \right)^2 \ln\left(\frac{a}{l_e} \right) \right] \tag{18}$$

Recent field-testing of different rubblized and crack and seat projects indicate a wide range in back-calculated moduli values (AASHTO 1993). For rubblized projects, M_R values varied from less than 10,000 psi (69 MPa) to several hundred thousand psi, with within-project coefficients of variation of as much as 40%. For crack and seat projects, M_R values varied from a few hundred thousand psi to few million psi, with within-project coefficient of variation of 40% or more.

Soil Classification Systems

The objective behind using soil classification system in the pavement design is to predict subgrade performance of a given soil. This classification is based on a few simple tests performed on soil in a disturbed condition. The two soil classification systems include AASHTO Classification System for soils and Unified Soil Classification System.

AASHTO Classification System for Soils

AASHTO Classification System for soils is the principal soil classification used in the United States by highway engineers. U.S. Bureau of Public Roads originally developed this system in 1928. According to the AASHTO system, soils are identified as two material types:

- Granular materials (i.e., materials having 35 percent or less, by weight, particles smaller than 0.0029 in diameter)
- Silt-clay materials (i.e., materials having more than 35 percent, by weight, particles smaller than 0.0029 in diameter)

These divisions are again grouped to form seven basic groups (A-1, A-2, A-3, A-4, A-5, A-6, and A-7), which have approximately the same general load-carrying capacity and service characteristics. Some of the basic groups have been subdivided into subgroups, thus making a total of 12 groups and subgroups. Typical resilient modulus values are presented in Table 2. These values may be used with utmost caution as they are very approximate (NCHRP 2004).

In general, A-1 is classified as the best highway subgrade soil and A-7 as the poorest. However, soils classified under A-3 are better subgrades than the soils in the A-2 group. From this, it can generally be assumed that for a given set of conditions, the thickness of the pavement must progressively increase as the soil classification group increases from A-1 to A-7, except as noted (Asphalt Institute 1989). Group index is used as a means of evaluating soils as subgrade materials within their groups. It is a function of the liquid limit, plasticity index, and the amount of material passing the 75 μm (No. 200) sieve and can be calculated by

$$\text{Group Index (GI)} = (\text{F-35})\,[0.2 + 0.005\,(\text{LL} - 40)] + 0.01\,(\text{F-15})\,(\text{PI} - 10) \qquad (19)$$

where F = percentage passing 75 μm (No. 200) sieve expressed as a whole number, LL = liquid limit, and PI = Plasticity Index.

Table 2. Typical resilient modulus values at optimum moisture content for unbound granular and subgrade materials using AASHTO classification system (AASHTO 2002 Design Guide)

Material Classification	Mr Range	Typical Mr
A-1-a	38,500-42,000	40,000
A-1-b	35,500-40,000	38,000
A-2-4	28,000-37,500	32,000
A-2-5	24,000-33,000	28,000
A-2-6	21,500-31,000	26,000
A-2-7	21,500-28,000	24,000
A-3	24,500-35,500	29,000
A-4	21,500-29,000	24,000
A-5	17,000-25,500	20,000
A-6	13,500-24,000	17,000
A-7-5	8,000-17,500	12,000
A-7-6	5,000-13,500	8,000

Unified Soil Classification System

The Unified Soil Classification System (USCS) was originally developed by Casagrande and formerly known as Airfield classification system (Yoder 1975). In the unified classification system, the soils are designated by letter symbols, with each letter having a particular meaning. Letter symbols used for this soil classification system are as follows: G for gravel, S for sand, M for silt, C for clay, W for well graded, P for poorly graded, U for uniformly graded, L for low liquid limit, and H for high liquid limit.

These letter symbols are combined to identify the soils. For example, CH indicates highly compressible clay and GW indicates the gravel, which is well graded. Soil components used in this system are cobbles, gravel, coarse sand, medium sand, fine sand, and fines. Typical resilient modulus values are presented in Table 3. These values may be used with utmost caution as they are very approximate (NCHRP 2004). Designer must choose a design M_R which represents the entire pavement foundation.

Unified soil classification is primarily based on the characteristics that determine how well a soil will behave when used as a construction material. These characteristics are evaluated by plotting the plasticity index versus the liquid limit on a standard plasticity chart. Both liquid and plastic limits are used to designate silts and clays. A liquid limit value of 50% distinguishes between high and low compressible soils. Table 4 depicts the typical Poisson's ratio values for unbound granular and subgrade materials.

Table 3. Typical resilient modulus values at optimum moisture content for unbound granular and subgrade materials using Unified Soil Classification System (MEPDG) (1 psi = 6.895 kPa)

Material Classification	M_r Range (psi)	Typical M_r (psi)
CH	5,000-13,500	8,000
MH	8,000-17,500	11,500
CL	13,500-24,000	17,000
ML	17,000-25,500	20,000
SW	28,000-37,500	32,000
SP	24,000-33,000	28,000
SW-SC	21,500-31,000	25,500
SW-SM	24,000-33,000	28,000
SP-SC	21,500-31,000	25,500
SP-SM	24,000-33,000	28,000
SC	21,500-28,000	24,000
SM	28,000-37,500	32,000
GW	39,500-42,000	41,000
GP	35,500-40,000	38,000
GW-GC	28,000-40,000	34,500
GW-GM	35,500-40,500	38,500
GP-GC	28,000-39,000	34,000
GP-GM	31,000-40,000	36,000
GC	24,000-37,500	31,000
GM	33,000-42,000	38,500

Table 4. Typical Poisson's ratios for unbound granular and subgrade materials (MEPDG)

Material Description	μRange	μTypical
Clay (saturated)	0.4-0.5	0.45
Clay (unsaturated)	0.1-0.3	0.2
Sandy Clay	0.2-0.3	0.25
Silt	0.3-0.35	0.325
Dense Sand	0.2-0.4	0.3
Coarse-grained sand	0.15	0.15
Fine-grained sand	0.25	0.25
Bedrock	0.1-0.4	0.25

In the Visual Basic program developed for this research, the subgrade modulus can either be calculated by FWD data or determined using either of the soil classification methods.

Typical resilient modulus values are presented in Tables 2 and 3. In Iowa counties, usually unbound/stabilized subbase is used on top of the subgrade. Thus, there is a need to combine the transformed thickness of subgrade in order to analyze the pavement as a three-layer interface. The concept of effective thickness is described below.

Odemark (1949) developed the concept of equivalent thickness. It is based on the assumption that the stresses and strains below a layer depend on the stiffness of that layer only. If the

thickness, modulus, and Poisson's ratio of layer are changed, but the stiffness remains unchanged, the stresses and strains below the layer should also remain unchanged. Figure 7 shows the transformation of thicknesses. Thus, the transformation may be written as follows:

$$h_e = h_1 \sqrt[3]{\frac{E_1}{E_2}} \tag{20}$$

where h_e is the equivalent thickness.

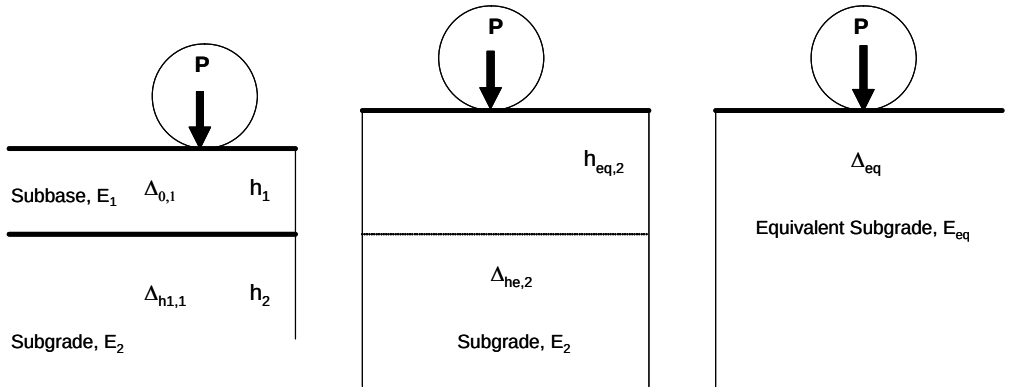

Figure 7. Odemark's transformation of a layered system

Using the Odemark's concept, similar approach was made to the case of the presence of unbound/stabilized base courses on top of the subgrade. Thus, the base layer was transformed into an equivalent subgrade modulus. The equivalent deflection is the sum of the deflections in the subbase (Δ_1) and subgrade (Δ_2):

$$\Delta_{EQ} = \Delta_1 + \Delta_2 \tag{21}$$

where

$$\Delta_1 = \left(\Delta_{0,1} - \Delta_{h,1}\right) \tag{22}$$

$$\Delta_2 = \Delta_{h_e,2} \tag{23}$$

$$\Delta_{0,1} = \frac{2\left(1-\nu^2\right)a}{E} \tag{24}$$

$$\Delta_{h,1} = \frac{(1+\nu)a}{E}\left\{\frac{a}{\left(a^2+h^2\right)^{0.5}} + \frac{1-2\nu}{a}\left[\left(a^2+h^2\right)^{0.5} - h\right]\right\} \tag{25}$$

$$\Delta_{h_e,2} = \frac{(1+\nu)a}{E}\left\{\frac{a}{\left(a^2+h_e{}^2\right)^{0.5}} + \frac{1-2\nu}{a}\left[\left(a^2+h_e{}^2\right)^{0.5} - h_e\right]\right\} \quad (26)$$

Fractured Portland Cement Concrete

PCC materials are grouped into two major subgroups: intact and fractured slabs. PCC slabs are fractured to reduce the reflective cracking in the subsequent overlays. The degree to which slab fracturing takes place is of paramount importance to properly assign the effective modulus values to the fractured slab if linear elastic layer procedures are used. As the PCC slabs are rubblized, the effective moduli of the PCC layer may approach that of a high-quality crushed stone base. The NAPA study indicated that when compared with the inherent strength of high-quality dense graded crushed stone base, the rubblized layer is from 1.5 to 3 times stronger. One of the most reliable ways of determining the in situ modulus is through back-calculation of FWD data.

The HMA overlay thickness design Visual Basic program developed in this study uses the AASHTO guide recommended modulus values for the PCC slab, as listed in Table 5.

Table 5. Recommended modulus values for fractured PCC layers (MEPDG) (1 psi = 6.895 kPa)

Fractured PCC Layer Type	Typical Modulus Ranges, psi		
Crack and Seat or Break and Seat	12 in. crack spacing	24 in. crack spacing	36 in. crack spacing
	200000	250000	300000
Rubblized	50,000 to 150,000		

Hot Mix Asphalt (HMA)

Asphalt is a visco-elastic plastic material. The modulus of an asphalt mix may approach that of an unbound granular material at high temperatures and long loading rates. The modulus of an asphalt mix plays critical role in the design and performance of an asphalt pavement structure. There are several methods to evaluate the modulus of asphalt. Direct testing procedures include the Complex (Dynamic) Modulus test, the Diametral (Resilient or Indirect) Modulus test, and the Flexural Stiffness test. Indirect predictive techniques such as nomographs (Shell, McLeod) and the predictive equations (models) are also used. Witczak and Fonseca's (1996) model is superior to all of the existing dynamic modulus predictive equations. It allows for the evaluation of dynamic modulus for a wide variety of asphalt mixtures/properties and also considers any degree of short- and long-term aging.

$$\log \mathrm{E} = \beta_1 + \frac{\beta_2}{1+\mathrm{e}^{(-0.716\log(\mathrm{f})-0.7425\log(\eta))}} \quad (27)$$

where E is the asphalt mix dynamic modulus, in 10^5 psi; parameter β_1 is a function of gradation and volumetric contents of effective binder content and viscosity; and parameter β_2 is a function of gradation.

HMA is a visco-elastic plastic material and is dependent on temperature. The effect of temperature on HMA moduli is discussed in the following section. HMA moduli have been calculated for the coldest (Estherville) and hottest weather stations (Burlington) of Iowa using the AASHTO 2002 Design Guide for each month (see Table 6). The moduli were calculated at 0.5, 1, 2, 3, 4, 8, and 16 inches (13, 25, 51, 76, 102, 203, and 406 mm), using Equation 27. A general observation of values showed that the moduli values of Estherville and Burlington were almost the same. By interpolating the moduli values of the both places, statewide moduli values for each month were determined.

Graphs were plotted and R^2 values were calculated for the natural logarithm of thicknesses and the obtained statewide moduli. The obtained R^2 values were ranging between 0.946 and 0.9909. Thus, this interpolation of the Burlington and Estherville moduli values can be justified. Table 6 has been used to find out the average moduli, used in the design process for a particular thickness of HMA overlay. Average modulus is given by the following equation:

$$E_{avg} = a*\ln(h_1-1)+b \quad (28)$$

where a and b are the intercept and the slope, respectively, for the graph plotted between the natural logarithm of thicknesses and the obtained statewide moduli (See Table 6), and h_1 is the thickness of HMA overlay.

Table 6. Statewide predicted moduli values of HMA (in psi) for Iowa (1 psi = 6.895 kPa)

	Thickness (h_1), inches							Intercept	Slope
	0.5	**1**	**2**	**3**	**4**	**8**	**16**	**a**	**b**
Jan	3524400	3421000	3324000	3238600	3172900	3048100	2883200	3423557	-184369
Feb	3522400	3417000	3318600	3231800	3165300	3039400	2873800	3419592	-186569
Mar	3524400	3416500	3309800	3210100	3130900	2985900	2805600	3416246	-208605
April	2938500	2616700	2306100	2055000	1892500	1664900	1493200	2592025	-433052
May	1514900	1218700	998800	843100	754000	637200	541600	1226486	-283102
June	919400	724500	592100	504500	453700	389100	330900	736089	-168793
July	641800	503400	412100	351800	317100	273300	232500	512869.8	-116955
Aug	838400	654000	529600	445100	396600	332500	270800	665623	-162515
Sep	1373200	1090800	883800	738100	652500	539900	422900	1101596	-273952
Oct	2713100	2331000	1993800	1709600	1524500	1232800	897100	2326867	-529671
Nov	3513800	3397300	3283400	3179100	3096400	2920100	2604300	3408091	-253817
Dec	3524400	3421000	3324000	3238600	3172900	3048100	2883200	3423557	-184369

Environment

The environmental factors that influence pavement performance include temperature, frost action, moisture, and drainage. Seasonal and annual variations of these factors affect the pavement layer and subgrade properties, thus affecting the load carrying capacity. In the mechanistic-empirical design, each year can be divided into a number of periods, each having a different set of layer moduli. The damage during each period is evaluated and summed throughout the year to determine the design life (Huang 2003).

Temperature

The effect of temperature on asphalt pavements is different from that on concrete pavements. Temperature affects the resilient modulus of asphalt layers and induces curling of concrete slabs. In cold climates, the resilient moduli of unstabilized materials also vary with the freeze-thaw cycles. The severity of cold climate is indicated by the freezing index, which can be correlated with the depth of frost penetration. For each seasonal period, there are corresponding subgrade conditions and resilient modulus values.

Hot Mix Asphalt

As asphalt is a visco-elastic material, its properties greatly depend upon temperature. At very cold temperatures, its stiffness is close to that of the PCC and reduces the strain in pavement, whereas at very warm temperatures its stiffness is close to an unbound material (NCHRP 2004). Low temperature can cause asphalt pavements to crack. The elastic modulus of Asphalt materials can vary from 2 to 3 million psi (14 to 21 GPa) or more during cold winter months to about 100,000 psi (0.7 GPa) or less during hot summer months.

PCC slab

Temperature differentials between top and bottom of the PCC slab cause significant stresses in the slab and also affect the slab-subgrade contact. These temperature differentials are generally defined in terms of temperature gradient. The loss of subgrade contact will affect the stresses in concrete due to wheel loads.

Temperature and moisture gradients, particularly at the top of PCC layer, can cause significant curling and warping stresses, respectively, thus resulting in pavement damage and distresses.

Subgrade

The resilient modulus of subgrade soils is assumed to be 1 million psi (6.8 GPa) for fine-grained materials and 2.5 million psi (17.2 GPa) for coarse-grained materials in frozen condition. On the other hand, warmer temperature causes thawing, resulting in increased moisture contents and a subsequent decrease in modulus values (NCHRP 2004).

Frost action

Frost action has detrimental effects on the underlying subgrade. It can be divided into two mechanisms: "frost heave" and "thaw weakening."

Frost Heave

Frost heaving of soil is caused by crystallization of ice within the larger soil voids and usually a subsequent extension of this ice to form continuous ice lenses, layers, veins, or other ice masses. Frost heave occurs primarily in soils containing fine particles, often termed "frost susceptible" soils, while clean sands and gravels, with small amounts of fine particles, are non-frost-susceptible. Thus, the degree of frost susceptibility is mainly a function of the percentage of fine particles within the soil.

The three basic methods to mitigate the frost heave are as follows:

- Limit the depth of frost into the subgrade soils
- Remove and replace frost-susceptible subgrade
- Provide a capillary break

Freeze-Thaw

The durability of materials greatly depends upon the freeze-thaw environment. It generally occurs when the ice contained within the subgrade melts. Freeze-thaw effects are experienced in the underlying layers, but eventually lead to distress in the pavement surface.

During a sudden spring thaw, melting will proceed almost entirely from the surface downward. This type of thawing leads to extremely poor drainage conditions. The frozen soil beneath the thawed layer can trap the water released by the melting ice lenses so that lateral and surface drainage are the only paths the water can take.

The basic methods to mitigate the freeze-thaw are as follows:

- Design the pavement structure based on reduced subgrade support
- Restrict pavement loading during thaw conditions

Moisture

Moisture tends to affect a number of subgrade properties, including load bearing capacity, shrinkage, and swelling. It can be influenced by drainage, groundwater table elevation, infiltration, or pavement porosity. Entrapped moisture within the pavement cross section contributes to the movement of fines within the base slab, thus causing pumping, faulting, and cracking. Saturated subgrade can be highly expansive and can deform excessively under loads.

Drainage

Proper drainage is one of the most important factors which affect the pavement performance. Good drainage is not considered important when the thickness design is based on saturated conditions. Due to the increasing traffic loading and volume, this concept is not considered true at present.

Water enters the pavement structure either by infiltration through cracks, joints, pavement surfaces, and shoulders or as groundwater from a high water table, interrupted aquifers, and localized springs. Water entrapped in a pavement structure can reduce the strength of the subgrade soils and granular materials.

In asphalt materials, entrapped water causes stripping of asphalt mixture and induces "D" cracking of concrete. It causes pumping, with subsequent faulting, cracking, and general shoulder deterioration in concrete pavements. In Table 7, the definitions for the various levels or quality of drainage are listed.

When the water table is high and close to the ground surface, a base course can raise the pavement to a desirable elevation above the water table. Where water can seep through pavement cracks and joints, an open-graded base course can carry it away to the road side. Drainage materials include aggregates, geotextiles, and pipes (Huang 2003). Drainage installation should be done prior to the overlay. Installation of the edge drains was successful in some of the rubblization projects.

Table 7. Quality of drainage for pavement design (AASHTO 1993 Design Guide)

Quality of Drainage	Water Removed Within
Excellent	2 hours
Good	1 day
Fair	1 week
Poor	1 month
Very Poor	Water will not drain

DATA ANALYSIS

In this section, the development of the mechanistic-empirical structural design program for HMA overlaid fractured PCC pavements is described.

Introduction

The design of HMA overlaid crack/seat and rubblized PCC pavement was performed using the mechanistic-empirical design process. HMA overlaid rubblized concrete pavements typically comprise of three layers: (a) HMA overlay, (b) rubblized PCC, and (c) subgrade. In the mechanistic-empirical design process, this three-layer structure is analyzed mechanistically to estimate the critical strains developed within the structure. These strain values are used to

estimate the structural capacity in terms of repeated traffic loading by using the empirically derived transfer functions. The design process and the steps followed in the accompanying software are detailed in the following subsections of this report. These results are compared with the results obtained from a field test section to validate the mechanistic component.

Design Process

Inputs

Traffic

The anticipated design period (usually 20 years) traffic, in terms of equivalent single axle loads (ESAL), is the traffic input.

Pavement

All existing and overlay components must be defined, both by geometry (thickness) and material characteristics (resilient modulus and Poisson's ratio). The modulus of supporting subgrade is based either on direct measurement (FWD), or by using the soil classification. A fixed Poisson's ratio of 0.40 is assumed for the subgrade. Since the existing PCC is normally supported on a granular subbase resting on the natural subgrade, this two-layer system must be replaced by an equivalent single material. This is achieved using the Odemark concept of equivalent thickness (as discussed previously).

The modulus and thickness of fractured slab are the required inputs. The modulus value is selected based on the rehabilitation method used (see Table 5). Poisson's ratio is assumed as 0.35 for the unbound granular material.

The determination of HMA modulus is a more complicated process than for PCC and subgrade. As HMA is a visco-elastic material, its properties greatly depend upon varying temperatures. Thus, the design year has been reduced to twelve months, each with a characteristic temperature and, hence, modulus. The AASHTO 2002 Design Guide provided a set of statewide modulus values for Iowa depending on climatic variations. These values were mostly similar across the state. Therefore, a single set of monthly HMA modulus values were used, as shown in Table 6.

The thickness of the HMA overlay is an unknown parameter in the design. Therefore, thickness must be assumed initially, and an iterative process is used to achieve the design thickness.

Program Steps

Input

Traffic, pavement geometry, and material characteristics are the inputs. Using the provided input information, the critical structural responses, namely the tensile strain at the bottom of the HMA

layer (ε_t) and the compressive strain on the top of the subgrade (ε_c), are estimated for each month of the design year.

Transfer Functions

The estimated monthly strains are mapped to capacity using the transfer functions shown below. Equation 29 is used to estimate the HMA capacity, whereas, Equation 30 is used to estimate the subgrade capacity:

$$N_f = f_1(\varepsilon_t)^{-f_2}(E_1)^{-f_3} \text{ [HMA Capacity]} \tag{29}$$

In the Asphalt Institute (AI) method, $f_1 = 0.0796$, $f_2 = 3.291$, and $f_3 = 0.854$. In the Shell method, $f_1 = 0.0685$, $f_2 = 5.671$, and $f_3 = 2.363$.

$$N_d = f_4(\varepsilon_c)^{-f_5} \text{ [Subgrade capacity]} \tag{30}$$

In the AI method, $f_4 = 1.365*10^{-9}$ and $f_5 = 4.477$. In the Shell method with 95% reliability, $f_4 = 1.05*10^{-7}$ and $f_5 = 4.0$.

Capacity Estimates

Using the Miners law, the total capacity ratios are computed for each distress by using the following equation:

$$\sum_{i=1}^{12} \frac{(n/12)_i}{N_{f_i}} \tag{31}$$

where $(n/12)_i$ represents the total traffic anticipated in month i over the design period.

This ratio should be numerically less than or equal to unity. If the capacity ratio exceeds unity, it means that the capacity of the pavement is insufficient for the expected traffic, and, therefore, the HMA overlay thickness must be increased and the process is repeated. Conversely, if this ratio is significantly less than unity, it means that there is an over capacity, and, therefore, the thickness of the HMA overlay may be reduced, and the process is repeated.

Proper care must be taken so that the capacity ratios for both failure types simultaneously meet the failure criterion.

Structural Analysis

Structural analysis is traditionally performed using a multi-layer linear elastic approach, usually addressed as Burmister approach. However, iterative procedures involving this approach can be time consuming, so a different approach has been used. The two critical strains are functions of geometry and elastic modulus of each layer. Thus, given the values of thickness and the moduli, it should be feasible to estimate the strains.

A large set of runs of an analytical 4-LIP program was undertaken in which the different layer thicknesses and the layer moduli were varied (h_1, h_2, E_1, E_2, E_3) and the critical strains (ε_t, ε_c) were computed. The evaluated thicknesses of the HMA overlay (h_1) were 2, 4, 6, 8, 10, and 12 inches and the thickness of the rubblized PCC (h_2) were 6, 8, 10, 12, and 14 inches. The modulus values of HMA overlay (E_1) were 250000, 500000, 1000000, and 2000000 psi, and the modulus values for rubblized PCC (E_2) were 50000, 75000, 100000, 125000, and 150000 psi. The following subgrade modulus (E_3) values were considered: 5000, 10000, 20000, and 50000 psi.

A total of 2,800 data sets based on different combinations of the above values were generated. The results are included in Appendix A. The tensile strains at the bottom of the HMA overlay (ε_t) and the compressive strains on top of the subgrade (ε_c) were obtained through 4-LIP analysis. This obtained data was then used to derive predictive relationships using the following equations:

$$\varepsilon_c = \phi_1 (h_1, h_2, E_1, E_2, E_3) \quad (32)$$

$$\varepsilon_t = \phi_2 (h_1, h_2, E_1, E_2, E_3) \quad (33)$$

Prediction of ε_c

The compressive strain on the top of the subgrade was predicted using the non-linear regression analysis. This regression analysis is a statistical tool for evaluating the relationship between one or more independent variables $X_1, X_2, X_3, \ldots X_K$ to a single, continuous dependent variable Y. This is often used when the independent variables cannot be controlled.

A second order polynomial regression analysis was performed for the obtained log values of ε_c and equivalent thickness H_e (Figure 8). Figure 8 indicates that the regression fits obtained for the given subgrade moduli are above 0.98. Also, the obtained regression equations are in quadratic form. A shift factor α dependent on subgrade modulus was observed and it was determined using the Solver function in Microsoft Excel.

A quadratic equation (see Equation 34) to determine the vertical compressive strain on the subgrade (ε_c) was obtained using the regression analysis. The plot of calculated ε_c versus regressed ε_c is shown in Figure 9. The regression was performed for all the data, excluding 2 inches of HMA overlay (See Appendix B).

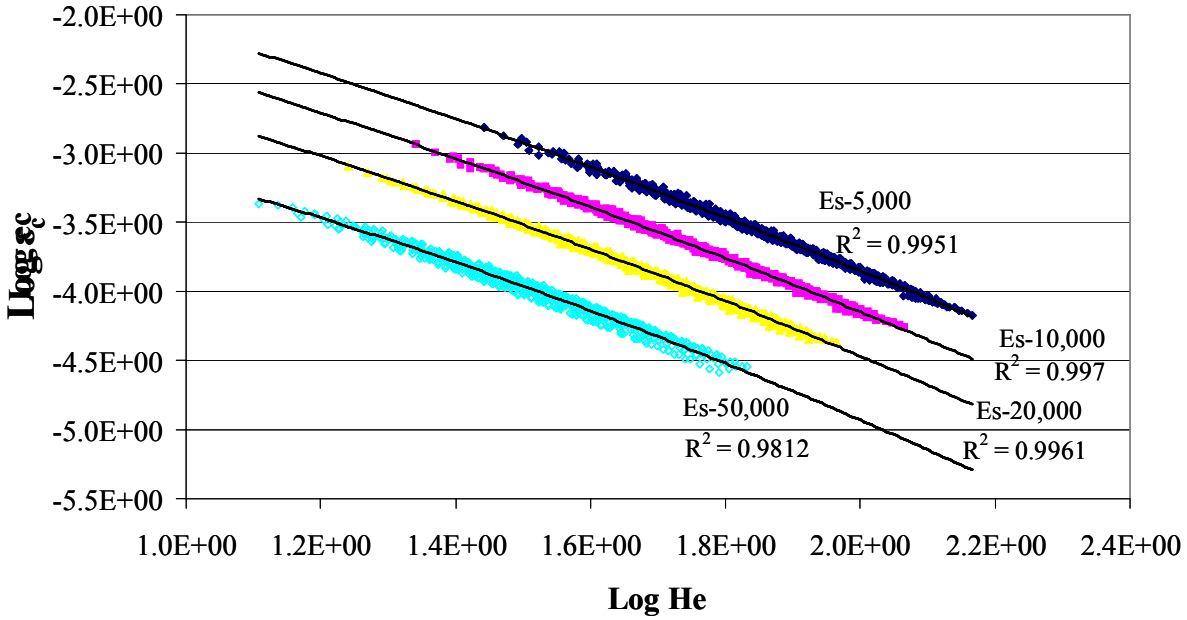

Figure 8. Relationship between obtained log ε_c and log H_e

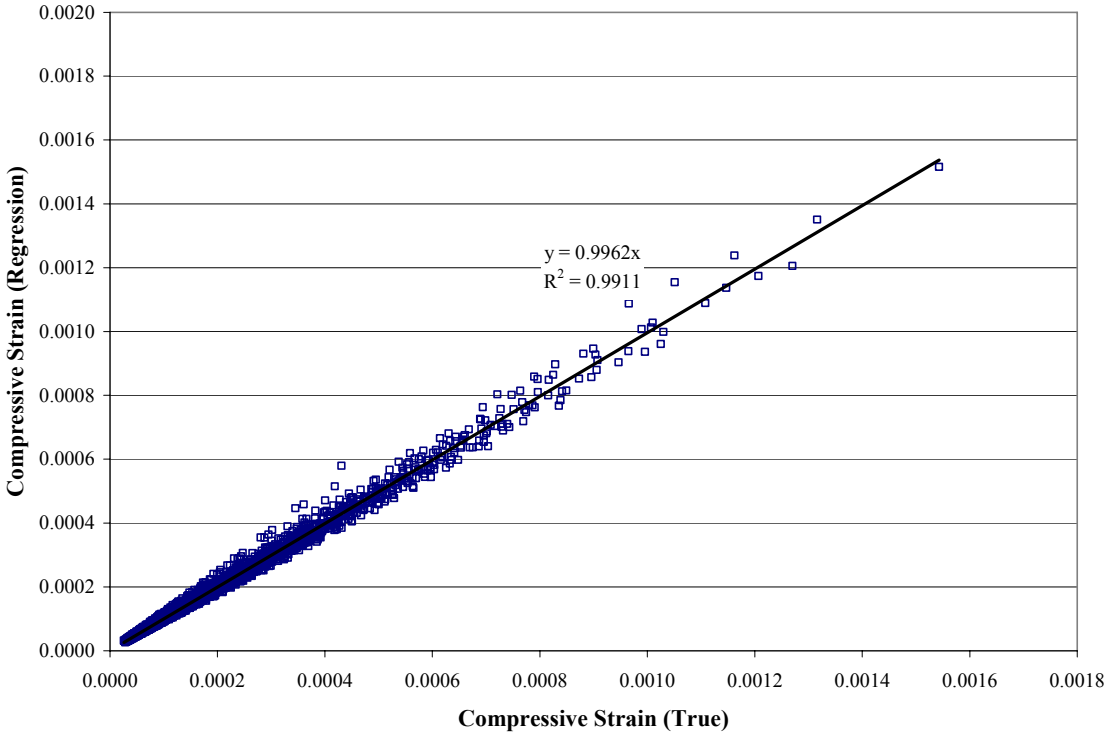

Figure 9. Relationship between calculated ε_c and regressed ε_c

The following regression equation was obtained for predicting the vertical compressive strain on top of the subgrade:

$$\text{Log}\,(\varepsilon_c) = -0.19445 - 1.50787\left(\log\left(H_e\right)+\alpha\right) - 0.07794\left(\log\left(H_e\right)+\alpha\right)^2 \quad (34)$$

where

$$H_e = h_{HMA}\left(\frac{E_{HMA}}{E_{SG}}\right)^{\frac{1}{3}} + h_{RPC}\left(\frac{E_{RPC}}{E_{SG}}\right)^{\frac{1}{3}} \quad (35)$$

$$\alpha = 0.568474\ln\left(E_{SG}\right) - 1.93734 \quad (36)$$

where the subscript *RPC* refers to rubblized PCC. The regression equation had an observed R^2 value of 0.991 and a standard error estimate of 0.000016.

Prediction of ε_t

When a circular load of radius *a* is applied on a single homogeneous material, the tensile strain can be predicted using Boussinesq's solution, as shown below (Huang 2003):

$$\epsilon_t = (1+\upsilon)\, q/2E\, [1-2\upsilon-\{2\,(1-\upsilon)\, z\,/(a^2+z^2)^{0.5}\}+\{z^3/(a^2+z^2)^{1.5}\}] \quad (37)$$

where *E* is the elastic modulus of the material, υ is its Poisson's ratio, *a* is the radius of circular load, and *z* is the depth.

Replacing *z* by *z/a*, the equation can be written as

$$\epsilon_t = (1+\upsilon)\, q/2E\, [\,1-2\upsilon-\{2(1-\upsilon)\,(z/a)\,/(1+(z/a)^2)^{0.5}\}+\{(z/a)^3/(1+(z/a)^2)^{1.5}\}] \quad (38)$$

Using a value of *a* = 5 inches, a graph can be plotted between the tensile strain obtained by the 4-LIP program and z/a, as shown in Figure 10.

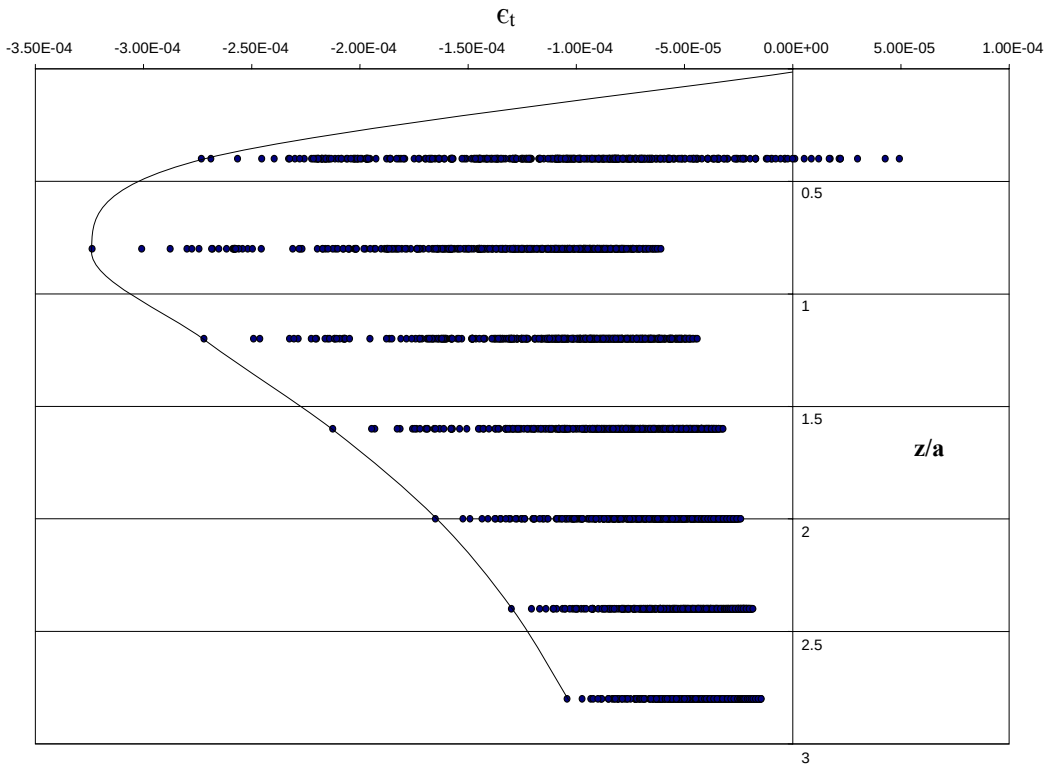

Figure 10. ε_t versus z/a based on 4-LIP analysis

Conventional linear and non-linear regression techniques did not lead to a satisfactory relationship between ϵ_t and the pavement layer parameters. Therefore, an Artificial neural networks (ANN) based approach was used for predicting ε_t.

Artificial Neural Networks—Background

Artificial neural networks (ANN) are statistical models of real-world systems which are built by tuning a set of parameters. These parameters, known as *weights*, describe a model which forms a mapping from a set of given values known as *inputs* to an associated set of values known as the *outputs*. The process of tuning the weights to the correct values is called *training* and is carried out by passing a set of examples of input-output pairs through the model and adjusting the weights in order to minimize the error between the answer given by the network and the desired output. Once the weights have been set, the model is able to produce answers for input values which were not included in the training data (Swingler 1996).

The mathematical model that a neural network builds is actually made up of a set of simple functions linked together by the weights. The weights describe the effect each simple function, known as *unit*, will have on the overall model. The network has a set of *input* units whose function is to take input values from outside, a set of *output* units which report the final answer, and a set of processing *hidden* units which link the inputs to the outputs. The function of the hidden units is to extract useful features from the input data which are, in turn, used to predict

the values on the output units. The network is arranged in layers of units: an input layer, one or more hidden layers, and an output layer. Figure 11 shows a schematic representation of the neural network.

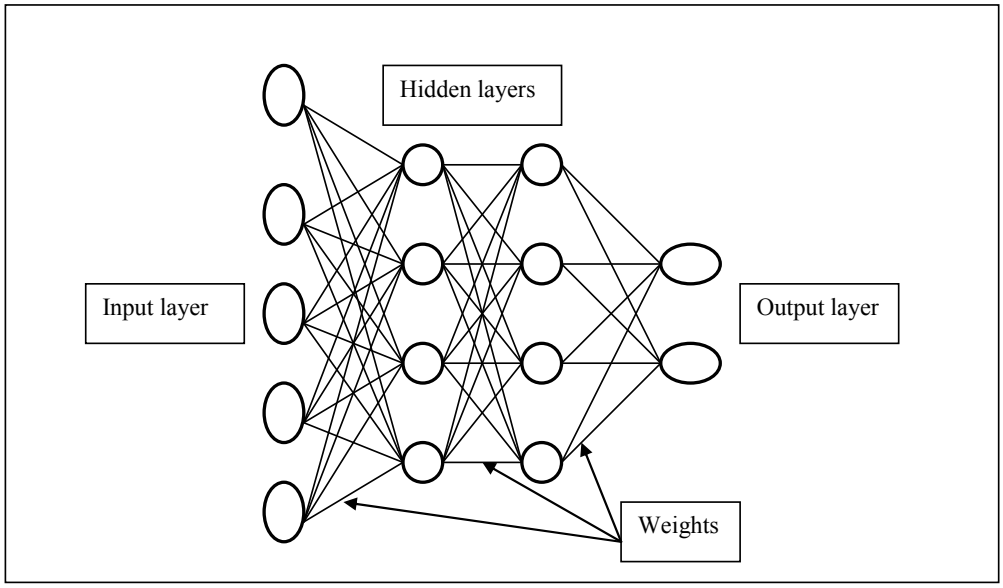

Figure 11. Schematic representation of an artificial neural network

Once a network has been structured for a particular application, that network is ready to be trained. To start this process, the initial weights are chosen randomly. Then, the training or learning begins. There are two approaches to training—supervised and unsupervised. In supervised training, both the inputs and the outputs are provided. The network then processes the inputs and compares its resulting outputs against the desired outputs. Errors are then propagated back through the system, causing the system to adjust the weights which control the network. This process occurs over and over as the weights are continually tweaked. The set of data which enables the training is called the "training set." During the training of a network, the same set of data is processed many times as the connection weights are ever refined. In unsupervised training, the network is provided with inputs but not with desired outputs. The system itself must then decide what features it will use to group the input data. This is often referred to as self-organization or adaption (Anderson and McNeil 1992).

In supervised training mode, weights, which are usually randomly set to begin with, are then adjusted by the network so that the next iteration, or cycle, will produce a closer match between the desired and the actual output. The learning method tries to minimize the current errors of all processing elements. This global error reduction is created over time by continuously modifying the input weights until acceptable network accuracy is reached.

After a supervised network performs well on the training data, then it is important to see what it can do with data it has not seen before. This testing is critical to insure that the network has not simply memorized a given set of data, but has learned the general patterns involved within an application.

Prediction of ε_t using ANN

For the prediction of horizontal tensile strain at the bottom of the asphalt layer, ϵ_t, the five inputs that were used are E_1, h_1, E_2, h_2, and E_3. The output is the horizontal tensile strain, ϵ_t. Two hidden layers were used with 50 nodes in each layer. Out of the 2800 data points, 2600 data points were used for the analysis (the data points with 2 in. and 4 in. HMA layers were not included). Of the 2,600 data points, 2,200 data points were used for training the neural network and 400 data points were used for testing. The values of ϵ_t obtained by the neural network analysis were compared with those obtained by the 4-LIP program and a graph was plotted, as shown in Figure 12. The detailed outputs are included in Appendix C.

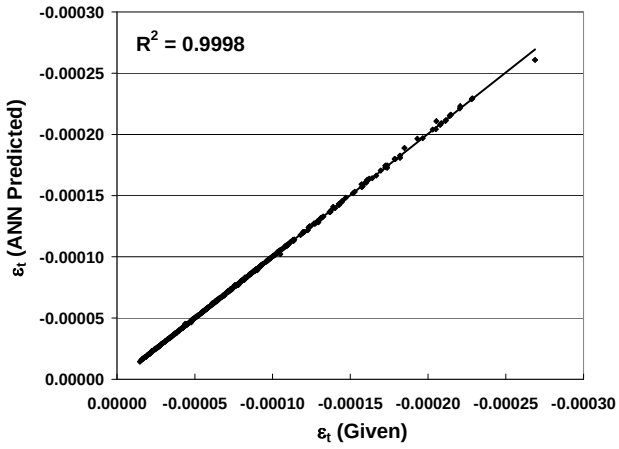

Figure 12. Given ε_t versus predicted ε_t

Sample Thickness Design Calculation

A worked-out example of determination of the thickness of HMA overlay for a rubblized PCC pavement for a given set of conditions and using the ME design approach, as discussed in this report, is provided below.

Step 1. HMA thickness should be assumed initially and is incremented till a reliable design value is obtained.

- Assumed HMA thickness (h_1) = 10 in (254 mm)
- Fractured PCC modulus (E_2) = 50,000 psi (344 MPa)
- Fractured PCC slab thickness (h_2) = 10 in (254 mm)
- Subgrade modulus (E_3) = 50,000 psi (344 MPa)

The values of E_2, h_2, and E_3 are obtained from the database included in Appendix B.

Step 2. The following are the assumed data:

- AADT = 35000
- 20 Year AADT = 42000

- Percent trucks = 10
- ESAL factor = 0.4

20 year ESALs are calculated using the Iowa DOT method as explained previously. Hence, 20 year ESALs = 9,744,000 and ESALs per month (n) = 9,744,000/12 = 812,000.

Step 3. For the assumed value of HMA overlay thickness, HMA modulus for every month can be determined using Equation 28. The values of ε_t and ε_c provided in Table 8 are obtained by using the ANN program and using Equations 34, 35, and 36, respectively.

N_f and N_d, the damage ratios for the fatigue and rutting, respectively, are obtained using Equations 29 and 30. The total capacity ratios for fatigue and rutting shown in Table 8 are calculated using the Miner's Law (Equation 31).

According to Miner's law, the capacity ratio should be less than or equal to one. The capacity ratios calculated from this procedure for given sets of conditions are 0.292 and 0.536 for fatigue and rutting, respectively. The obtained capacity ratios are very low. Therefore, the thickness of HMA overlay must be decreased and the procedure must be repeated to obtain a reliable design value.

To consider several different input scenarios and to facilitate design computations, the above mentioned steps used in determining the thickness of HMA overlay for a rubblized PCC pavement based on the ME design approach were coded into a Visual Basic program with a user-friendly graphical interface. A screenshot of the HMA overlay thickness design Visual Basic program is displayed in Figure 13.

Table 8. Calculation of HMA modulus and pavement capacity (sample design)

Month	HMA Modulus (E_1) (psi)	εt	N_f	n/N_f	εc	N_d	n/N_d
Jan	3183401	3.16E-05	143422524	0.005662	1.31E-04	332946288	0.00244
Feb	3176570	3.17E-05	143387286	0.005663	1.31E-04	331370702	0.00245
Mar	3144520	3.18E-05	143140656	0.005673	1.32E-04	324036477	0.00251
Apr	2027938	3.95E-05	101205065	0.008023	1.63E-04	125179117	0.00649
May	857721	7.28E-05	28323705	0.028669	2.41E-04	21467893	0.03782
Jun	516222	9.92E-05	15767940	0.051497	3.00E-04	8124364	0.09995
Jul	360526	1.20E-04	11322621	0.071715	3.47E-04	4223033	0.19228
Aug	453934	1.07E-04	13926245	0.058307	3.16E-04	6406531	0.12675
Sep	744750	7.97E-05	23687375	0.034280	2.56E-04	16296778	0.04983
Oct	1636924	4.59E-05	74587293	0.010887	1.80E-04	79659772	0.01019
Nov	3077473	3.20E-05	142523716	0.005697	1.33E-04	309001345	0.00263
Dec	3183401	3.16E-05	143422524	0.005662	1.31E-04	332946288	0.00244
			Capacity ratio= 0.292			**Capacity ratio= 0.536**	

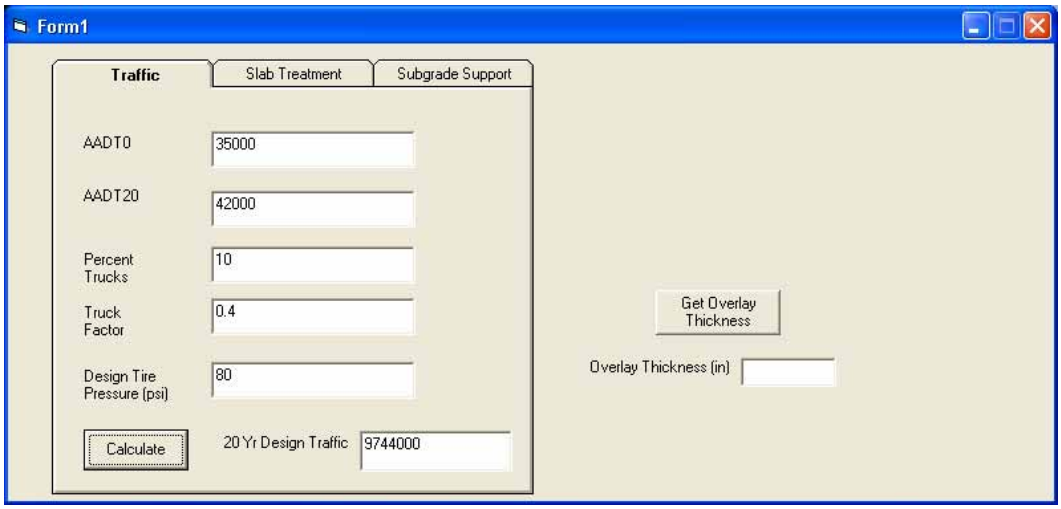

Figure 13. Screenshot of HMA overlay thickness design Visual Basic Program

Validation

While the ME approach is well established in the field of pavement design and analysis, two elements require validation in order to ensure confidence in their approach—the presentation of strain and the prediction of capacity.

Prediction of capacity is beyond the scope of this project to validate, since one would have to monitor a pavement or pavements for their complete design life to make a confidence statement as to the validity of the method. However, the initial studies that generated the relevant transfer functions and forty years of subsequent use have provided a general validation of this approach and these relationships.

However, successful use of these transfer functions is predicated upon the use of appropriate values of input strains. For the practical validation of the predictive capabilities, limited calibration has been performed using the results from the instrumented trial sections on IA-141, Polk County in Iowa. It is located approximately one mile north of the junction with I-80/I-35 northwest of Des Moines.

The test sections were located in the southbound lanes. The strain gauges were placed in the outside lane. The rubblized PCC sections, labeled T9 thru T12, were located approximately as shown in Table 9.

Table 9. Rubblized PCC test sections (IA 141, Polk County, Iowa)

Section	Start Station	End Station
T9	85	80
T10	80	75
T11	74	69
T12	69	64

Sections T9 and T10 comprise a nominal 7.5 inch (190 mm) of HMA overlay (2 in [51 mm] surface + 2.5 in [63 mm] intermediate + 3 in [76 mm] base) over the 10 in [254 mm] rubblized PCC slab. Sections T11 and T12 comprise a nominal 9 in HMA (2 in [51 mm] surface + 2 in [51 mm] intermediate + 5 in [127 mm] base in two layers: 2 in [51 mm] over 3 in [76 mm]) over the same rubblized PCC slab.

The PCC slab was rubblized using an Antigo multi-head breaker, covering the full width of the lane. The rubblized slab exhibited smaller pieces in the top half, approximately one- to three-inch in size, while the bottom half comprised particles up to about eight inches.

The Dynatest PAST 2AC™ strain gauges were used. These were located in-line with the anticipated outer wheel path and placed on the surface of the rubblized PCC slab by embedding in sand/bituminous emulsion slurry. Sections T9 and T12 each had two strain gauges spaced two feet apart (labeled 2 and 3, 10 and 11, respectively), while Sections T10 and T11 had three gauges spaced two feet apart (labeled 4, 5, and 6; 7, 8, and 9, respectively). At the location of each set of gauges, a thermocouple was installed to allow measurement of the temperature at the bottom of the overlay/top of the rubblized PCC.

The HMA overlay mixtures were conventionally placed and compacted using paver and rollers. Care was taken during the placement of the first base layer to avoid damage to the gauges by direct contact with the paver tracks or by displacement.

The construction operations on these sections were undertaken on September 15th, 2001. All instrumentation was installed between construction operations.

Subsequent Testing

After construction and on three subsequent occasions, the locations were revisited and a series of tests were performed.

- The Iowa DOT Falling Weight Deflectometer was located as precisely as possible over each strain gauge. Three drops were made (nominally 9,000 lb load) and the surface deflections recorded. The peak strains measured in the embedded gauges were also recorded.
- An Iowa DOT truck, loaded to closely simulate a “standard” axle condition, was driven over the gauges at creep speed. The strain history (strain versus time) in the gauges was measured.
- The temperature measured at the bottom of the HMA overlay was recorded.

Table10 summarizes the modulus of the pavement layers and tensile strain values at the bottom of the HMA layer obtained from the testing done on different sections on IA-141. These moduli values were backcalculated from the FWD data using the MODULUS back-calculation program. The tensile strain values were calculated under FWD, standard truck axle load, as well as using the developed ANN model, and the results are compared in Table 10.

From Table 10, it can be observed that the strains recorded on gauges 10 and 11 have consistently given low values when compared to gauges 7, 8, and 9, for which the pavement is nominally the same. This may be due to a misalignment of these gauges during the construction process.

Key Findings

Tensile strains at the bottom of the HMA layer recorded under the FWD are generally in agreement with the modeled results and provide a measure of validity to the use of the model.

Strains recorded under the "standard" truck axle are more variable and of generally lesser magnitude than those under the FWD. This can be attributed to the difficulty of aligning the truck directly over the gauges, the dual tire configuration, and the slow speed (crawl) used.

Table 10. Tensile Strains at the bottom of HMA layer obtained on IA-141 highway, Polk County, Iowa (1 in = 25.4 mm, 1 psi = 6.895 kPa)

Month	Gauge	Depth, in	Backcalculated Moduli, psi			Strains, με		
			E_1	E_2	E_3	FWD	Truck	Model
Sep,2001	2	7.5	841100	152000	21450	55	48	60
	3	7.5	841100	152000	21450	62	57	60
	4	7.5	841100	152000	21450	62	52	60
	5	7.5	841100	152000	21450	57	59	60
	6	7.5	841100	152000	21450	62	62	60
	7	9	808700	170800	23220	47	38	47
	8	9	808700	170800	23220	44	46	47
	9	9	808700	170800	23220	50	31	47
	10	9	808700	170800	23220	7	5	47
	11	9	808700	170800	23220	9	7	47
Apr,2002	2	7.5	2086400	148000	22500	43	33	38
	3	7.5	2086400	148000	22500	38	29	38
	4	7.5	2086400	148000	22500	38	18	38
	5	7.5	2086400	148000	22500	37	35	38
	6	7.5	2086400	148000	22500	39	29	38
	7	9	2168500	149800	28100	35	20	29
	8	9	2168500	149800	28100	28	29	29
	9	9	2168500	149800	28100	27	18	29
	10	9	2168500	149800	28100	5	4	29
	11	9	2168500	149800	28100	5	6	29
Jul,2002	2	7.5	444000	166100	24500	-	-	69
	3	7.5	444000	166100	24500	-	-	69
	4	7.5	444000	166100	24500	70	45	69
	5	7.5	444000	166100	24500	71	67	69
	6	7.5	444000	166100	24500	65	72	69
	7	9	345500	171400	24600	-	-	60
	8	9	345500	171400	24600	-	-	60
	9	9	345500	171400	24600	-	-	60
	10	9	345500	171400	24600	10	8	60
	11	9	345500	171400	24600	11	8	60
Sep,2002	2	7.5	1605500	166200	22900	-	-	42
	3	7.5	1605500	166200	22900	-	-	42
	4	7.5	1605500	166200	22900	42	42	42
	5	7.5	1605500	166200	22900	53	26	42
	6	7.5	1605500	166200	22900	36	36	42
	7	9	1801100	159900	25100	32	34	32
	8	9	1801100	159900	25100	35	33	32
	9	9	1801100	159900	25100	32	31	32
	10	9	1801100	159900	25100	5	4	32
	11	9	1801100	159900	25100	6	5	32

SUMMARY AND OBSERVATIONS

In Iowa, most surfaced highway pavements are of portland cement concrete (PCC) type. These pavements usually deteriorate due to distresses caused by a combination of traffic loads and weather conditions. The most commonly used rehabilitation technique for deteriorated PCC pavements is to overlay it with Hot Mix Asphalt (HMA). However, the performance of HMA overlaid PCC pavements is hindered due to the occurrence of reflective cracking, resulting in significant reduction of pavement serviceability. To minimize reflective cracking, various fractured slab techniques including rubblization, crack and seat, and break and seat are used which involve reducing the slab action.

A majority of research studies reported in the literature indicated that among the various fractured slab techniques, rubblization is considered to be a viable, rapid, and cost-effective rehabilitation method for deteriorated PCC pavements.

Currently, there does not seem to be a viable design methodology for designing HMA overlay thickness for crack/seat and rubblized PCC pavements. The HMA overlay thickness design methodology used in the state of Iowa is purely empirical. This report documents the development of a mechanistic-empirical design procedure for HMA overlay thickness design for crack/seat and rubblized PCC pavements.

An HMA overlay design system was developed based on mechanistic-empirical design approach using multi-layer elastic theory. An analytical DOS program, 4-LIP, was used to generate a database of results for developing regression and ANN models for predicting the critical structural responses. In this design procedure, failure criteria such as the tensile strain at the bottom of HMA layer and the vertical compressive strain on the surface of subgrade are used to consider HMA fatigue and subgrade rutting, respectively. Design parameters, including material properties, traffic, and environmental factors were established.

The developed mechanistic-empirical design system was also implemented in a Visual Basic computer program with a user-friendly interface. A partial validation of this design method is provided in this report with reference to an instrumented trial project at highway IA-141 located in Polk County, Iowa.

Prediction of capacity is beyond the scope of this project to validate since one would have to monitor a pavement or pavements for their complete design life to make a confident statement as to the validity of the method. However, the initial studies that generated the relevant transfer functions and forty years of subsequent use have provided a general validation of this approach and these relationships. Tensile strain values at the bottom of the HMA layer collected from the Falling Weight Deflectometer (FWD) testing at this project site are generally in agreement with the results obtained from the developed computer program.

REFERENCES

AASHTO. 1986. *Guide for Design of Pavement Structures*. Published by American Association of State Highway and Transportation Officials, Washington D.C, USA.

AASHTO. 1993. *AASHTO Guide for Design of Pavement Structures*. Published by American Association of State Highway and Transportation Officials, Washington D.C, USA.

Anderson, D. and McNeil, G. 1992. Artificial Neural Networks Technology. http://www.dacs.dtic.mil/techs/neural. (Date Accessed: 09/22/2004).

Asphalt Institute. 1981. Thickness Design – Asphalt Pavements for Highways and Streets. Manual Series 1 (MS-1), Asphalt Institute, Lexington, KY.

Asphalt Institute. 1989. *The Asphalt Handbook*. Manual series No.4 (MS-4), USA.

APA (Asphalt Pavement Alliance). 2003. http://www.asphaltalliance.com/upload/focus_rubblize-QA.pdf. Date Accessed: 11/06/2004.

Bemanian, S., and P. Sebaaly. 1999. Cost effective rehabilitation of Portland cement concrete pavement in Nevada. *Transportation Research Record* 1684, pp. 156-164.

Bush, A. J. and G. Y. Baladi 1989. *Nondestructive Testing of Pavements and Backcalculation of Moduli*. ASTM, Philadelphia, PA.

Corley-Lay, J. B., Hearne, T. M. Jr., and S. S. Wu. 1995. Deflection study and design of Crack and Seat Pavement Rehabilitation. *Transportation Research Record* 1513, 47-53.

Dauzats, M., and A. Rampal. 1987. Mechanism of Surface Cracking in Wearing Courses. Proceedings of the Sixth International Conference on Structural Design of Asphalt Pavements, University of Michigan, Ann Arbor, 232- 247.

Drake, E.B. 1988. Pavement Rehabilitation by Breaking and Seating Existing Portland Cement Concrete Pavement Prior to Bituminous Concrete Overlays. Presented at the 1988 Annual Meeting of the Transportation Research Board.

Eckrose, R.A., and W. E. Poston, Jr. 1982. Asphalt Overlays on Cracked and Seated concrete Pavements. Information Series 83, National Asphalt Pavement Association.

NCHRP. 2004. *AASHTO Guide for Mechanistic-Empirical Design of new and rehabilitated Pavement Structures*. NCHRP Project I-37A, Illinois, USA.

Estakhri, C. K., Pendleton, O., and R. L. Lytton. 1994. Evaluation of asphalt-rubber interlayers. Final report: task 4, FHWA, Texas.

FHWA .1987. *Crack and Seat Performance*. Review Report, Demonstration Projects Division and Pavement Division, Federal Highway Administration, Washington D.C.

Freeman, T. E. 2002. Evaluation of Concrete Slab Fracturing Techniques in Mitigating Reflective Cracking through Asphalt Overlays. Final Report. VTRC 03-R3. Virginia Transportation Research Council, Charlottesville, Virginia.

Galal, A. K., Coree, B., J., Haddock, E., J., and T. D. White. 1999. Structural Adequacy of Rubblized Portland Cement Concrete Pavement. *Transportation Research Record* 1684. National Research Council, Washington, D.C.

Gerritsen, A. H.; Van Gurp, C.A.P.M., van der Heide, J. P. J., Molenaar, A.A.A. and A. C. Pronk 1987. Prediction and Prevention of Surface Cracking in Asphaltic Pavements. Proceedings of the Sixth International Conference on Structural Design of Asphalt Pavements, University of Michigan, Ann Arbor, 378-391.

Gulen, S. and A. S. Noureldin. 2000. Evaluation of Concrete Pavement Rehabilitation Techniques on I-65 in Indiana. *Transportation Research Record* 1730, 167-176.

Hall, K. T., and A. Mohseni. 1991. Backcalculation of Asphalt Concrete – Overlaid Portland Cement Concrete Pavement Layer Moduli. *Transportation Research Record* 1293, pp. 112-122.

Hotmix Database. 2004. AASHO Road Test. http://hotmix.ce.washington.edu/wsdot_web/Modules/06_structural_design/aasho_road_test.htm, A collaboration of CALTRANS, MNDOT, TXDOT, WSDOT, NCAT, Date Accessed: 11/06/2004.

Huang, H., Y. 2003. *Pavement Analysis and Design*. Prentice Hall, New Jersey.

Ioannides, A. M. 1990. Dimensional Analysis in NDT Rigid Pavement Evaluation. *Transportation Engineering Journal*, ASCE, Vol. 116, No.TE1.

Ioannides, A. M., Barenberg, E. J., and J. A. Lary. 1989. Interpretation of Falling Weight Deflectometer Results Using Principles of Dimensional Analysis. Proceedings of the Fourth International Conference on Concrete Pavement Design and Rehabilitation, Purdue University, West Lafayette, Indiana.

ITS. 2000. South Africa / United States Pavement Technology Workshop, Module 3: Pavement Structural Design. Videotape series of seminar given from 20 - 23 March 2000 at the University of California Field Station, Richmond, CA.

Kennedy, C. K. and N. W. Lister. 1978. Prediction of Pavement Performance and the Design of Overlays. TRRL Laboratory Report (Transport and Road Research Laboratory, Great Britain), No. 833.

Kingham, R. I. 1969. Asphalt Overlay Design. Highway Research Record No. 30. Highway Research Board, Washington, D.C, pp. 37-42.

Kota, Tejeswi. 2004. Development of Structural Design Program for Fractured PCC Pavements with emphasis on Subgrade Compressive Strain Criteria. Master's Thesis report, Iowa State University.

Ksaibati, K., Miley, W., and J. Armaghani. 1999. Rubblization of Concrete Pavements. *Transportation Research Record* 1684, 165-171.

Losberg, A. 1960. Structurally Reinforced Concrete Pavements. Doktorsavhandlingar Vid Chalmers Tekniska Hogskola, Goteborg, Sweden.

Lytton, R. L. 1989. Use of Geotextiles for Reinforcement and Strain Relief in Asphalt Concrete. *Geotextiles and Geomembranes*, Volume 8.

Mathews, Reshma. 2004. Development of a Structural Design Program for Fractured PCC Pavements with Emphasis on HMA Tensile Strain Criteria. Master's Thesis Report, Iowa State University.

Miner, M. A. (1945). Cumulative Damage in Fatigue. Journal of Applied Mechanics, Vol. 12, pp. A159-A164.

Myers, L. A., Roque, R., and B. E. Ruth. 1998. Mechanisms of Surface-Initiated Longitudinal Wheel Path Cracks in High-Type Bituminous Pavements. Proceedings, Vol. 67, Association of Asphalt Paving Technologies.

National Academy. 1961. The AASHO Road Test History and Description of Project.

Niederquell, M. G., Baladi, G. Y., and K. Chatti. 2000. Rubblization of Concrete Pavements. Transportation Research Record 1730.

Nunn, M. 1998. Design of Long-Life Roads for Heavy Traffic. Proceedings of Industry Conference, Australian Asphalt Pavement Association, Queensland, Australia.

Odemark, N. 1949. Undersokning av elasticitetegenskaperna hos olika jordarter samt teori for berakning av belagningar eligt elasticitesteorin, Statens Vaginstitute, meddelande 77, Stockholm, Sweden. (in Danish).

Portland Cement Association (PCA). 1984. Thickness Design for Concrete Highway and Street Pavements. Portland Cement Association, Skokie, IL.
PCS (Pavement Consultancy Services). 1991. Guidelines and Methodologies for the rehabilitation of Rigid Highway Pavements Using Asphalt Concrete Overlays. Engineering Report prepared by NAPA and SAPAE, Maryland.
Picket, D. L., and R. L. Lytton. 1983. Laboratory Evaluation of Selected Fabrics for Reinforcement of Asphaltic Concrete Overlays. Texas Transportation Institute, Report 261-1, Texas A&M University.
Roberts, L. F., Kandhal, S., P., Brown, E., R., Lee, D., H., T. W. Kennedy. 1996. Hot Mix Asphalt Materials, Mixture Design, and Construction. NAPA Research and Education Foundation, Lanham, Maryland.
SAS 1985. SAS User's Guide: Statistics. Version 5 Edition. SAS Institute, Inc., Cary, North Carolina.
Sebaaly, P. E., Lani, S., Bemanian, S., and C. Cocking. 1996. Flexible Pavement Overlays the State Experience. *Transportation Research Record* 1568.
Swingler, K. 1996. Applying Neural Networks: A Practical Guide. Morgan Kaufman Pub., Academic Press, San Francisco, CA.
Thompson, M. R. 1996. Mechanistic-Empirical Flexible Pavement Design: an overview. *Transportation Research Record* 1539, pp. 1-5.
Thompson, M., R. 1999. Hot mix asphalt overlay design concepts for rubblized Portland cement concrete pavements. *Transportation Research Record* 1684, 147-155.
Thompson, M., R., Van Matre, Lippert, F., David, and J. Paul 1997. HMA Overlay Construction with One-Pass/Lane-Width PCCP Rubblization. Journal of the Association of Asphalt Paving Technologists, v 66, 407.
Thompson M. R., and Q. L. Robnett. 1976. Resilient Properties of Subgrade Soils, Final Report – Data Summary. Transportation Engineering Series 14, Illinois Cooperative Highway Research and Transportation Program Series 160, University of Illinois at Urbana-Champaign.
Uhlymeyer, J. S., Willoughby, K., Pierce, L. M., and J. P. Mahoney. 2000. Top-Down Cracking in Washington State Asphalt Concrete Wearing Courses. *Transportation Research Record* 1730, 110-116.
Westergaard, H. M. 1939. Stresses in Concrete Runways of Airports. HRB Proceedings, v 19.
Witczak, M. W. and O. A. Fonseca. 1996. Revised Predictive Model for Dynamic (Complex) Modulus of Asphalt Mixtures. *Transportation Research Record* 1540, pp. 15-23.
Yoder, E. J. 1975. Interpretation of Soil Test Data for Design of Highway Pavements, Influence of Geology and Variability. American Society of Mechanical Engineers (Paper), Proceedings of International Conference on Material Technology, pp. 677-682.
Yoder, E. J., and M. J. Witczak. 1975. Principles of Pavement Design. John Wiley & Sons Inc., New York.

APPENDIX A: DATABASE CREATED USING 4-LIP PROGRAM

NOTATIONS

E(1) = Elastic modulus of HMA layer (in psi)
E(2) = Elastic modulus of rubblized PCC layer (in psi)
E(3) = Elastic modulus of subgrade (in psi)
h(1) = Thickness of HMA layer (in inches)
h(2) = Thickness of rubblized PCC layer (in inches)

D(0) = Surface deflection measured at 0-inch offset from the center of the load (in mils)
D(12) = Surface deflection measured at 12-inch offset from the center of the load (in mils)
D(18) = Surface deflection measured at 18-inch offset from the center of the load (in mils)
D(24) = Surface deflection measured at 24-inch offset from the center of the load (in mils)
D(36) = Surface deflection measured at 36-inch offset from the center of the load (in mils)

et = Horizontal tensile strain at the bottom of the HMA layer (in strains)
ec = Vertical compressive strain on top of the subgrade (in strains)

Note:
1 psi = 6.89 kPa
1 in = 25.4 mm

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
1	250000	2	50000	6	5000	0.04565	0.02697	0.01937	0.01364	0.005758	-0.000215	2.47E-03
2	250000	2	50000	6	10000	0.03085	0.01526	0.01018	0.00683	0.002835	-0.000217	1.81E-03
3	250000	2	50000	6	20000	0.02112	0.008268	0.005092	0.00328	0.001379	-0.000218	1.23E-03
4	250000	2	50000	6	50000	0.01357	0.003502	0.001948	0.00123	0.0005429	-0.000218	6.47E-04
5	250000	2	50000	8	5000	0.03842	0.02291	0.01703	0.01238	0.005385	-0.000181	1.84E-03
6	250000	2	50000	8	10000	0.02728	0.01368	0.009505	0.0066	0.002795	-0.000195	1.36E-03
7	250000	2	50000	8	20000	0.01963	0.007766	0.004964	0.00329	0.001386	-0.000206	9.40E-04
8	250000	2	50000	8	50000	0.01357	0.003514	0.001961	0.00124	0.0005464	-0.000217	5.04E-04
9	250000	2	50000	10	5000	0.03314	0.01944	0.01471	0.01088	0.004834	-0.00017	1.41E-03
10	250000	2	50000	10	10000	0.02467	0.01223	0.008711	0.00619	0.002673	-0.000188	1.05E-03
11	250000	2	50000	10	20000	0.01855	0.007275	0.004763	0.00323	0.001373	-0.000202	7.32E-04
12	250000	2	50000	10	50000	0.01356	0.003522	0.001971	0.00125	0.0005496	-0.000216	3.96E-04
13	250000	2	50000	12	5000	0.02913	0.01654	0.01261	0.00943	0.004246	-0.000168	1.10E-03
14	250000	2	50000	12	10000	0.02268	0.01096	0.007901	0.0057	0.002502	-0.000186	8.33E-04
15	250000	2	50000	12	20000	0.01773	0.006821	0.004528	0.00312	0.001342	-0.000201	5.82E-04
16	250000	2	50000	12	50000	0.01356	0.003525	0.001977	0.00126	0.0005523	-0.000216	3.17E-04
17	250000	2	50000	14	5000	0.02603	0.01416	0.0108	0.00813	0.003694	-0.00017	8.80E-04
18	250000	2	50000	14	10000	0.02111	0.009847	0.007132	0.0052	0.00231	-0.000186	6.72E-04
19	250000	2	50000	14	20000	0.01708	0.006411	0.00428	0.00298	0.001297	-0.000201	4.72E-04
20	250000	2	50000	14	50000	0.01355	0.003527	0.001981	0.00126	0.0005543	-0.000216	2.57E-04
21	250000	2	75000	6	5000	0.03986	0.02525	0.01873	0.01348	0.005765	-8.81E-05	2.04E-03
22	250000	2	75000	6	10000	0.02684	0.01459	0.01012	0.00694	0.002887	-0.000104	1.53E-03
23	250000	2	75000	6	20000	0.01813	0.008018	0.005156	0.00338	0.001403	-0.000117	1.08E-03
24	250000	2	75000	6	50000	0.01123	0.003431	0.002002	0.00127	0.0005463	-0.000131	6.05E-04
25	250000	2	75000	8	5000	0.03261	0.02086	0.01597	0.01183	0.005224	-6.97E-05	1.49E-03
26	250000	2	75000	8	10000	0.02308	0.01276	0.009226	0.00656	0.002804	-9.12E-05	1.14E-03
27	250000	2	75000	8	20000	0.01635	0.007352	0.00494	0.00335	0.001407	-0.000109	8.15E-04
28	250000	2	75000	8	50000	0.01087	0.003343	0.001999	0.00129	0.0005507	-0.000128	4.66E-04
29	250000	2	75000	10	5000	0.02733	0.01718	0.01336	0.01006	0.004532	-6.81E-05	1.13E-03
30	250000	2	75000	10	10000	0.02035	0.01113	0.008242	0.006	0.002621	-8.96E-05	8.70E-04
31	250000	2	75000	10	20000	0.01507	0.006721	0.004644	0.00323	0.001378	-0.000108	6.30E-04
32	250000	2	75000	10	50000	0.0106	0.003247	0.001975	0.00129	0.0005525	-0.000128	3.63E-04
33	250000	2	75000	12	5000	0.02338	0.01419	0.01111	0.00844	0.003849	-7.23E-05	8.76E-04
34	250000	2	75000	12	10000	0.01827	0.009711	0.007281	0.00537	0.002389	-9.18E-05	6.84E-04
35	250000	2	75000	12	20000	0.01409	0.006147	0.004315	0.00306	0.001324	-0.00011	4.98E-04
36	250000	2	75000	12	50000	0.0104	0.003152	0.001937	0.00128	0.0005511	-0.000128	2.89E-04
37	250000	2	75000	14	5000	0.02038	0.01182	0.009249	0.00706	0.003246	-7.85E-05	6.93E-04
38	250000	2	75000	14	10000	0.01663	0.008501	0.0064	0.00477	0.002145	-9.53E-05	5.49E-04
39	250000	2	75000	14	20000	0.01332	0.005634	0.003983	0.00286	0.001254	-0.000111	4.02E-04
40	250000	2	75000	14	50000	0.01024	0.003063	0.001892	0.00126	0.0005465	-0.000128	2.34E-04
41	250000	2	100000	6	5000	0.03631	0.02404	0.01818	0.01327	0.005731	-1.97E-05	1.76E-03
42	250000	2	100000	6	10000	0.02442	0.0141	0.01002	0.00698	0.002918	-4.2E-05	1.34E-03
43	250000	2	100000	6	20000	0.01637	0.007841	0.005184	0.00344	0.001422	-6.12E-05	9.71E-04
44	250000	2	100000	6	50000	0.009931	0.00339	0.002036	0.0013	0.0005501	-8.21E-05	5.66E-04
45	250000	2	100000	8	5000	0.0291	0.01944	0.01514	0.01136	0.005064	-1.22E-05	1.28E-03
46	250000	2	100000	8	10000	0.02061	0.01212	0.008978	0.00648	0.002795	-3.64E-05	9.89E-04
47	250000	2	100000	8	20000	0.01447	0.007074	0.004901	0.00338	0.00142	-5.77E-05	7.26E-04
48	250000	2	100000	8	50000	0.009389	0.003243	0.002017	0.00131	0.0005555	-8.06E-05	4.32E-04
49	250000	2	100000	10	5000	0.02387	0.01566	0.01238	0.00942	0.00428	-1.71E-05	9.60E-04
50	250000	2	100000	10	10000	0.01784	0.01038	0.007867	0.00581	0.002563	-3.93E-05	7.54E-04

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
51	250000	2	100000	10	20000	0.0131	0.006361	0.004536	0.00321	0.001378	-5.95E-05	5.58E-04
52	250000	2	100000	10	50000	0.008999	0.00309	0.001969	0.00131	0.000556	-8.11E-05	3.36E-04
53	250000	2	100000	12	5000	0.02	0.01266	0.01006	0.00772	0.003547	-2.54E-05	7.39E-04
54	250000	2	100000	12	10000	0.01573	0.008886	0.006812	0.0051	0.002287	-4.44E-05	5.89E-04
55	250000	2	100000	12	20000	0.01206	0.005718	0.004145	0.00299	0.001305	-6.25E-05	4.40E-04
56	250000	2	100000	12	50000	0.008704	0.002942	0.001903	0.00129	0.000551	-8.22E-05	2.66E-04
57	250000	2	100000	14	5000	0.01711	0.01033	0.008203	0.00632	0.002924	-3.42E-05	5.80E-04
58	250000	2	100000	14	10000	0.01407	0.007631	0.005871	0.00443	0.00201	-4.99E-05	4.70E-04
59	250000	2	100000	14	20000	0.01124	0.005149	0.00376	0.00274	0.001215	-6.57E-05	3.54E-04
60	250000	2	100000	14	50000	0.008472	0.002806	0.001828	0.00125	0.0005412	-8.33E-05	2.15E-04
61	250000	2	125000	6	5000	0.03384	0.0231	0.01771	0.01305	0.00568	2.2E-05	1.58E-03
62	250000	2	125000	6	10000	0.02276	0.01371	0.009923	0.00699	0.002936	-3.48E-06	1.21E-03
63	250000	2	125000	6	20000	0.01518	0.0077	0.005194	0.00349	0.001438	-2.6E-05	8.89E-04
64	250000	2	125000	6	50000	0.009082	0.00336	0.00206	0.00132	0.0005537	-5.12E-05	5.33E-04
65	250000	2	125000	8	5000	0.02667	0.01836	0.01447	0.01094	0.004915	2.15E-05	1.13E-03
66	250000	2	125000	8	10000	0.01893	0.01163	0.008758	0.00639	0.002776	-3.71E-06	8.85E-04
67	250000	2	125000	8	20000	0.01322	0.006862	0.004856	0.00339	0.001429	-2.62E-05	6.60E-04
68	250000	2	125000	8	50000	0.008439	0.003172	0.002027	0.00133	0.0005598	-5.12E-05	4.04E-04
69	250000	2	125000	10	5000	0.0215	0.01453	0.0116	0.00889	0.004066	1.21E-05	8.45E-04
70	250000	2	125000	10	10000	0.01615	0.009809	0.007552	0.00563	0.002504	-9.94E-06	6.71E-04
71	250000	2	125000	10	20000	0.01181	0.006091	0.004438	0.00318	0.001373	-3.04E-05	5.05E-04
72	250000	2	125000	10	50000	0.007977	0.002981	0.00196	0.00132	0.0005591	-5.29E-05	3.13E-04
73	250000	2	125000	12	5000	0.01771	0.01154	0.009258	0.00715	0.003303	9.85E-07	6.46E-04
74	250000	2	125000	12	10000	0.01403	0.008268	0.006433	0.00486	0.002195	-1.71E-05	5.22E-04
75	250000	2	125000	12	20000	0.01074	0.005402	0.004001	0.00292	0.001284	-3.49E-05	3.97E-04
76	250000	2	125000	12	50000	0.007629	0.002799	0.001873	0.00129	0.0005509	-5.48E-05	2.47E-04
77	250000	2	125000	14	5000	0.01492	0.009262	0.007544	0.00583	0.002675	-9.53E-06	5.04E-04
78	250000	2	125000	14	10000	0.01238	0.00699	0.005455	0.00415	0.001896	-2.4E-05	4.15E-04
79	250000	2	125000	14	20000	0.009885	0.004797	0.003579	0.00264	0.001179	-3.91E-05	3.18E-04
80	250000	2	125000	14	50000	0.007355	0.002633	0.001777	0.00124	0.0005364	-5.65E-05	2.00E-04
81	250000	2	150000	6	5000	0.03198	0.02233	0.01729	0.01284	0.005623	4.93E-05	1.44E-03
82	250000	2	150000	6	10000	0.02152	0.0134	0.009822	0.00699	0.002946	2.21E-05	1.11E-03
83	250000	2	150000	6	20000	0.01432	0.00758	0.005194	0.00352	0.00145	-2.26E-06	8.24E-04
84	250000	2	150000	6	50000	0.008477	0.003334	0.002077	0.00134	0.0005571	-3E-05	5.05E-04
85	250000	2	150000	8	5000	0.02484	0.01748	0.0139	0.01058	0.004777	4.27E-05	1.03E-03
86	250000	2	150000	8	10000	0.01769	0.01122	0.008558	0.0063	0.002753	1.74E-05	8.08E-04
87	250000	2	150000	8	20000	0.01232	0.006687	0.00481	0.00339	0.001434	-5.62E-06	6.08E-04
88	250000	2	150000	8	50000	0.007768	0.003116	0.002032	0.00135	0.0005637	-3.15E-05	3.81E-04
89	250000	2	150000	10	5000	0.01973	0.01362	0.01096	0.00844	0.00388	2.99E-05	7.61E-04
90	250000	2	150000	10	10000	0.0149	0.009347	0.007278	0.00547	0.002447	8.63E-06	6.10E-04
91	250000	2	150000	10	20000	0.01088	0.005873	0.004348	0.00315	0.001365	-1.16E-05	4.64E-04
92	250000	2	150000	10	50000	0.007261	0.002896	0.001949	0.00133	0.0005615	-3.43E-05	2.94E-04
93	250000	2	150000	12	5000	0.01602	0.01066	0.008611	0.00668	0.003099	1.69E-05	5.77E-04
94	250000	2	150000	12	10000	0.01278	0.007773	0.006113	0.00465	0.002112	-6.09E-08	4.72E-04
95	250000	2	150000	12	20000	0.009786	0.005149	0.003874	0.00286	0.001262	-1.72E-05	3.63E-04
96	250000	2	150000	12	50000	0.006879	0.002691	0.001845	0.00128	0.0005503	-3.69E-05	2.32E-04
97	250000	2	150000	14	5000	0.01333	0.008439	0.006811	0.0053	0.002473	5.3E-06	4.47E-04
98	250000	2	150000	14	10000	0.01114	0.006485	0.005113	0.00391	0.001797	-7.88E-06	3.73E-04
99	250000	2	150000	14	20000	0.008918	0.004519	0.003423	0.00255	0.001145	-2.22E-05	2.91E-04
100	250000	2	150000	14	50000	0.006579	0.002503	0.001733	0.00122	0.0005317	-3.92E-05	1.87E-04

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
101	250000	4	50000	6	5000	0.03773	0.02662	0.02128	0.01698	0.0108	-0.000324	1.54E-03
102	250000	4	50000	6	10000	0.02511	0.0155	0.01158	0.00877	0.005205	-0.000301	1.15E-03
103	250000	4	50000	6	20000	0.01702	0.008793	0.006058	0.00435	0.002479	-0.00028	7.96E-04
104	250000	4	50000	6	50000	0.01083	0.004066	0.002447	0.00166	0.0009442	-0.000259	4.31E-04
105	250000	4	50000	8	5000	0.03338	0.02365	0.01932	0.01583	0.0106	-0.000288	1.21E-03
106	250000	4	50000	8	10000	0.0229	0.01417	0.01084	0.00843	0.005236	-0.000278	9.06E-04
107	250000	4	50000	8	20000	0.0161	0.008317	0.005844	0.00429	0.002515	-0.000268	6.34E-04
108	250000	4	50000	8	50000	0.01082	0.004073	0.002456	0.00167	0.000949	-0.000258	3.45E-04
109	250000	4	50000	10	5000	0.03007	0.02121	0.01757	0.01467	0.01021	-0.000268	9.65E-04
110	250000	4	50000	10	10000	0.02121	0.01305	0.01013	0.00804	0.005185	-0.000265	7.28E-04
111	250000	4	50000	10	20000	0.01538	0.007893	0.005617	0.0042	0.00253	-0.000262	5.12E-04
112	250000	4	50000	10	50000	0.01082	0.004077	0.002463	0.00168	0.0009536	-0.000258	2.80E-04
113	250000	4	50000	12	5000	0.02747	0.01917	0.01601	0.01355	0.009698	-0.000258	7.87E-04
114	250000	4	50000	12	10000	0.01987	0.01209	0.009468	0.00763	0.005076	-0.000258	5.96E-04
115	250000	4	50000	12	20000	0.01481	0.007523	0.005394	0.00409	0.002524	-0.000258	4.21E-04
116	250000	4	50000	12	50000	0.01082	0.004079	0.002467	0.00168	0.0009579	-0.000258	2.31E-04
117	250000	4	50000	14	5000	0.02535	0.01744	0.01463	0.01249	0.009131	-0.000252	6.52E-04
118	250000	4	50000	14	10000	0.0188	0.01127	0.008869	0.00723	0.004926	-0.000254	4.95E-04
119	250000	4	50000	14	20000	0.01435	0.007199	0.005181	0.00397	0.002502	-0.000256	3.50E-04
120	250000	4	50000	14	50000	0.01082	0.00408	0.00247	0.00169	0.0009616	-0.000257	1.93E-04
121	250000	4	75000	6	5000	0.03406	0.02484	0.02037	0.0166	0.01091	-0.000228	1.32E-03
122	250000	4	75000	6	10000	0.02263	0.01459	0.01125	0.00872	0.005319	-0.000216	1.01E-03
123	250000	4	75000	6	20000	0.01523	0.008311	0.005962	0.00439	0.00254	-0.000205	7.27E-04
124	250000	4	75000	6	50000	0.009457	0.003805	0.002433	0.0017	0.0009621	-0.000193	4.18E-04
125	250000	4	75000	8	5000	0.0296	0.02172	0.01823	0.01527	0.01057	-0.000197	1.01E-03
126	250000	4	75000	8	10000	0.02022	0.0131	0.01038	0.00828	0.005319	-0.000195	7.80E-04
127	250000	4	75000	8	20000	0.01407	0.007698	0.005667	0.00429	0.002579	-0.000193	5.69E-04
128	250000	4	75000	8	50000	0.009218	0.003707	0.002404	0.0017	0.0009738	-0.00019	3.31E-04
129	250000	4	75000	10	5000	0.02627	0.0192	0.01635	0.01395	0.01003	-0.000183	7.96E-04
130	250000	4	75000	10	10000	0.01841	0.01187	0.009563	0.0078	0.005221	-0.000185	6.19E-04
131	250000	4	75000	10	20000	0.01319	0.007166	0.005367	0.00415	0.002585	-0.000187	4.54E-04
132	250000	4	75000	10	50000	0.009034	0.003614	0.002366	0.00169	0.0009827	-0.000189	2.66E-04
133	250000	4	75000	12	5000	0.02366	0.01712	0.0147	0.01271	0.009393	-0.000176	6.43E-04
134	250000	4	75000	12	10000	0.01701	0.01084	0.008827	0.00732	0.005057	-0.000181	5.01E-04
135	250000	4	75000	12	20000	0.01251	0.006709	0.005078	0.004	0.002564	-0.000184	3.69E-04
136	250000	4	75000	12	50000	0.008889	0.00353	0.002324	0.00168	0.0009882	-0.000188	2.17E-04
137	250000	4	75000	14	5000	0.02156	0.01535	0.01325	0.01156	0.008708	-0.000173	5.29E-04
138	250000	4	75000	14	10000	0.01589	0.009961	0.008164	0.00685	0.004851	-0.000178	4.13E-04
139	250000	4	75000	14	20000	0.01196	0.006315	0.004809	0.00383	0.002522	-0.000183	3.05E-04
140	250000	4	75000	14	50000	0.008773	0.003456	0.002281	0.00166	0.0009901	-0.000187	1.80E-04
141	250000	4	100000	6	5000	0.03165	0.02364	0.01971	0.01629	0.01094	-0.000167	1.16E-03
142	250000	4	100000	6	10000	0.02101	0.01398	0.01101	0.00867	0.005392	-0.000161	9.04E-04
143	250000	4	100000	6	20000	0.01408	0.008003	0.005893	0.00441	0.002583	-0.000156	6.68E-04
144	250000	4	100000	6	50000	0.008628	0.003662	0.00243	0.00172	0.0009756	-0.000151	4.01E-04
145	250000	4	100000	8	5000	0.02721	0.02047	0.01746	0.01483	0.0105	-0.000142	8.81E-04
146	250000	4	100000	8	10000	0.01853	0.01241	0.01005	0.00816	0.005362	-0.000144	6.92E-04
147	250000	4	100000	8	20000	0.01281	0.007316	0.005546	0.00428	0.002622	-0.000145	5.16E-04
148	250000	4	100000	8	50000	0.008263	0.003507	0.002377	0.00172	0.0009916	-0.000147	3.13E-04
149	250000	4	100000	10	5000	0.02391	0.01792	0.01552	0.01343	0.009859	-0.000132	6.89E-04
150	250000	4	100000	10	10000	0.01669	0.01113	0.009181	0.00762	0.005224	-0.000137	5.44E-04

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
151	250000	4	100000	10	20000	0.01187	0.006728	0.005201	0.00411	0.002618	-0.000141	4.08E-04
152	250000	4	100000	10	50000	0.007987	0.003363	0.002313	0.0017	0.001002	-0.000146	2.50E-04
153	250000	4	100000	12	5000	0.02134	0.01583	0.01383	0.01211	0.009126	-0.000128	5.53E-04
154	250000	4	100000	12	10000	0.01528	0.01007	0.008401	0.00709	0.005017	-0.000134	4.37E-04
155	250000	4	100000	12	20000	0.01114	0.006228	0.004876	0.00392	0.002583	-0.000139	3.30E-04
156	250000	4	100000	12	50000	0.007771	0.003235	0.002245	0.00167	0.001007	-0.000145	2.03E-04
157	250000	4	100000	14	5000	0.01926	0.01405	0.01234	0.0109	0.008363	-0.000127	4.53E-04
158	250000	4	100000	14	10000	0.01415	0.009169	0.007704	0.00658	0.004771	-0.000133	3.59E-04
159	250000	4	100000	14	20000	0.01056	0.005801	0.004576	0.00373	0.002524	-0.000139	2.71E-04
160	250000	4	100000	14	50000	0.007599	0.003122	0.002177	0.00164	0.001006	-0.000145	1.67E-04
161	250000	4	125000	6	5000	0.02993	0.02276	0.01919	0.01603	0.01094	-0.000124	1.05E-03
162	250000	4	125000	6	10000	0.01984	0.01352	0.01081	0.00861	0.005441	-0.000123	8.25E-04
163	250000	4	125000	6	20000	0.01326	0.007779	0.005835	0.00442	0.002617	-0.000122	6.20E-04
164	250000	4	125000	6	50000	0.008057	0.003568	0.002428	0.00174	0.0009864	-0.000121	3.83E-04
165	250000	4	125000	8	5000	0.02552	0.01956	0.01689	0.01448	0.01041	-0.000105	7.90E-04
166	250000	4	125000	8	10000	0.01734	0.01191	0.009801	0.00805	0.005383	-0.000109	6.26E-04
167	250000	4	125000	8	20000	0.01194	0.007044	0.005452	0.00427	0.002652	-0.000113	4.75E-04
168	250000	4	125000	8	50000	0.007616	0.003375	0.002358	0.00173	0.001005	-0.000118	2.97E-04
169	250000	4	125000	10	5000	0.02227	0.01701	0.01491	0.01301	0.009696	-9.8E-05	6.14E-04
170	250000	4	125000	10	10000	0.01551	0.01061	0.008893	0.00747	0.005212	-0.000104	4.89E-04
171	250000	4	125000	10	20000	0.01096	0.006423	0.005077	0.00407	0.002639	-0.00011	3.73E-04
172	250000	4	125000	10	50000	0.007285	0.0032	0.002276	0.0017	0.001017	-0.000116	2.35E-04
173	250000	4	125000	12	5000	0.01973	0.01491	0.01318	0.01165	0.008894	-9.6E-05	4.91E-04
174	250000	4	125000	12	10000	0.01409	0.009528	0.008085	0.0069	0.004972	-0.000103	3.92E-04
175	250000	4	125000	12	20000	0.01021	0.005899	0.004727	0.00386	0.002592	-0.000109	3.00E-04
176	250000	4	125000	12	50000	0.007029	0.003045	0.00219	0.00167	0.00102	-0.000116	1.90E-04
177	250000	4	125000	14	5000	0.01767	0.01313	0.01167	0.01039	0.008073	-9.62E-05	4.01E-04
178	250000	4	125000	14	10000	0.01296	0.008617	0.007365	0.00636	0.004693	-0.000103	3.20E-04
179	250000	4	125000	14	20000	0.009608	0.005453	0.004406	0.00365	0.002519	-0.000109	2.46E-04
180	250000	4	125000	14	50000	0.006825	0.002909	0.002106	0.00162	0.001017	-0.000116	1.56E-04
181	250000	4	150000	6	5000	0.02862	0.02207	0.01878	0.01581	0.01093	-9.36E-05	9.66E-04
182	250000	4	150000	6	10000	0.01895	0.01316	0.01065	0.00856	0.005476	-9.51E-05	7.64E-04
183	250000	4	150000	6	20000	0.01265	0.007604	0.005786	0.00442	0.002644	-9.66E-05	5.80E-04
184	250000	4	150000	6	50000	0.007633	0.003498	0.002425	0.00175	0.0009956	-9.92E-05	3.66E-04
185	250000	4	150000	8	5000	0.02426	0.01886	0.01643	0.01419	0.01033	-7.83E-05	7.21E-04
186	250000	4	150000	8	10000	0.01645	0.01153	0.009598	0.00796	0.005392	-8.39E-05	5.75E-04
187	250000	4	150000	8	20000	0.01129	0.006837	0.005374	0.00425	0.002674	-8.92E-05	4.41E-04
188	250000	4	150000	8	50000	0.007142	0.003279	0.002342	0.00174	0.001017	-9.59E-05	2.82E-04
189	250000	4	150000	10	5000	0.02104	0.01631	0.01442	0.01267	0.009546	-7.39E-05	5.58E-04
190	250000	4	150000	10	10000	0.01462	0.01021	0.008662	0.00734	0.005193	-8.08E-05	4.47E-04
191	250000	4	150000	10	20000	0.01029	0.006193	0.004976	0.00403	0.002653	-8.73E-05	3.45E-04
192	250000	4	150000	10	50000	0.006776	0.003082	0.002247	0.0017	0.001028	-9.51E-05	2.23E-04
193	250000	4	150000	12	5000	0.01853	0.0142	0.01267	0.01126	0.008688	-7.36E-05	4.45E-04
194	250000	4	150000	12	10000	0.01322	0.009119	0.007833	0.00675	0.004925	-8.08E-05	3.57E-04
195	250000	4	150000	12	20000	0.009526	0.005653	0.004608	0.00381	0.002594	-8.74E-05	2.76E-04
196	250000	4	150000	12	50000	0.006486	0.002909	0.00215	0.00166	0.001032	-9.38E-05	1.79E-04
197	250000	4	150000	14	5000	0.01648	0.01243	0.01113	0.00997	0.007822	-7.48E-05	3.62E-04
198	250000	4	150000	14	10000	0.01209	0.0082	0.007096	0.00618	0.004619	-8.17E-05	2.91E-04
199	250000	4	150000	14	20000	0.008919	0.005195	0.004273	0.00358	0.00251	-8.81E-05	2.26E-04
200	250000	4	150000	14	50000	0.00627	0.002757	0.002053	0.00161	0.001024	-9.56E-05	1.47E-04

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
201	250000	6	50000	6	5000	0.03112	0.02387	0.02018	0.01698	0.01193	-0.000272	1.03E-03
202	250000	6	50000	6	10000	0.02065	0.01422	0.01136	0.00911	0.005953	-0.000249	7.75E-04
203	250000	6	50000	6	20000	0.01399	0.008312	0.006189	0.0047	0.002884	-0.000229	5.46E-04
204	250000	6	50000	6	50000	0.008916	0.004059	0.002664	0.00187	0.00109	-0.000208	3.02E-04
205	250000	6	50000	8	5000	0.02828	0.02167	0.01853	0.01584	0.01152	-0.000246	8.41E-04
206	250000	6	50000	8	10000	0.01921	0.01319	0.01067	0.00869	0.005874	-0.000233	6.35E-04
207	250000	6	50000	8	20000	0.01339	0.007923	0.005958	0.00459	0.002888	-0.00022	4.48E-04
208	250000	6	50000	8	50000	0.008915	0.004062	0.002669	0.00187	0.001094	-0.000207	2.47E-04
209	250000	6	50000	10	5000	0.02597	0.01981	0.01707	0.01475	0.01104	-0.000231	6.96E-04
210	250000	6	50000	10	10000	0.01803	0.0123	0.01003	0.00827	0.005749	-0.000222	5.27E-04
211	250000	6	50000	10	20000	0.01289	0.007579	0.005734	0.00446	0.002873	-0.000215	3.72E-04
212	250000	6	50000	10	50000	0.008914	0.004064	0.002673	0.00188	0.001099	-0.000207	2.06E-04
213	250000	6	50000	12	5000	0.02408	0.01823	0.01578	0.01376	0.01053	-0.000221	5.84E-04
214	250000	6	50000	12	10000	0.01706	0.01154	0.009445	0.00787	0.005595	-0.000216	4.43E-04
215	250000	6	50000	12	20000	0.01248	0.007276	0.005523	0.00433	0.002845	-0.000212	3.14E-04
216	250000	6	50000	12	50000	0.008913	0.004065	0.002676	0.00188	0.001102	-0.000207	1.73E-04
217	250000	6	50000	14	5000	0.02251	0.01688	0.01464	0.01285	0.01001	-0.000214	4.96E-04
218	250000	6	50000	14	10000	0.01625	0.01088	0.008924	0.00748	0.005425	-0.000212	3.77E-04
219	250000	6	50000	14	20000	0.01214	0.00701	0.005328	0.00421	0.002807	-0.000209	2.68E-04
220	250000	6	50000	14	50000	0.008912	0.004066	0.002678	0.00188	0.001105	-0.000207	1.48E-04
221	250000	6	75000	6	5000	0.02873	0.02237	0.01922	0.01642	0.01184	-0.000211	9.07E-04
222	250000	6	75000	6	10000	0.01908	0.01339	0.01093	0.00892	0.005989	-0.000195	7.01E-04
223	250000	6	75000	6	20000	0.01288	0.007829	0.00599	0.00465	0.002926	-0.000181	5.12E-04
224	250000	6	75000	6	50000	0.008074	0.003759	0.002573	0.00186	0.001111	-0.000166	3.01E-04
225	250000	6	75000	8	5000	0.02568	0.02	0.01741	0.01513	0.01133	-0.000186	7.25E-04
226	250000	6	75000	8	10000	0.01744	0.01221	0.01011	0.00842	0.005872	-0.000179	5.63E-04
227	250000	6	75000	8	20000	0.01209	0.007319	0.005682	0.00449	0.002922	-0.000171	4.13E-04
228	250000	6	75000	8	50000	0.007909	0.00367	0.002531	0.00185	0.001118	-0.000164	2.43E-04
229	250000	6	75000	10	5000	0.02328	0.01804	0.01584	0.01394	0.01075	-0.000173	5.90E-04
230	250000	6	75000	10	10000	0.01613	0.01122	0.009383	0.00792	0.005702	-0.000169	4.60E-04
231	250000	6	75000	10	20000	0.01146	0.006878	0.005389	0.00433	0.002893	-0.000166	3.39E-04
232	250000	6	75000	10	50000	0.007777	0.003589	0.002488	0.00183	0.001123	-0.000162	2.00E-04
233	250000	6	75000	12	5000	0.02135	0.01641	0.01449	0.01287	0.01015	-0.000165	4.89E-04
234	250000	6	75000	12	10000	0.01508	0.01038	0.008735	0.00746	0.005504	-0.000164	3.82E-04
235	250000	6	75000	12	20000	0.01095	0.006497	0.00512	0.00415	0.002847	-0.000163	2.82E-04
236	250000	6	75000	12	50000	0.007669	0.003517	0.002444	0.00181	0.001123	-0.000161	1.67E-04
237	250000	6	75000	14	5000	0.01977	0.01503	0.01332	0.01191	0.009561	-0.00016	4.11E-04
238	250000	6	75000	14	10000	0.01422	0.009666	0.008163	0.00703	0.005293	-0.00016	3.22E-04
239	250000	6	75000	14	20000	0.01053	0.006168	0.004874	0.00399	0.002788	-0.000161	2.38E-04
240	250000	6	75000	14	50000	0.00758	0.003453	0.002401	0.00179	0.001121	-0.000161	1.41E-04
241	250000	6	100000	6	5000	0.02706	0.02131	0.01852	0.01599	0.01175	-0.000168	8.17E-04
242	250000	6	100000	6	10000	0.01799	0.01281	0.01061	0.00878	0.006005	-0.000158	6.41E-04
243	250000	6	100000	6	20000	0.01213	0.007509	0.005858	0.00462	0.002955	-0.000148	4.79E-04
244	250000	6	100000	6	50000	0.007542	0.003586	0.002526	0.00186	0.001125	-0.000138	2.93E-04
245	250000	6	100000	8	5000	0.02395	0.01887	0.01663	0.01461	0.01116	-0.000146	6.44E-04
246	250000	6	100000	8	10000	0.01625	0.01156	0.009733	0.00822	0.005855	-0.000142	5.08E-04
247	250000	6	100000	8	20000	0.01124	0.006933	0.005503	0.00443	0.002943	-0.000138	3.82E-04
248	250000	6	100000	8	50000	0.007285	0.003445	0.002458	0.00184	0.001135	-0.000134	2.35E-04
249	250000	6	100000	10	5000	0.02154	0.01688	0.01502	0.01337	0.01051	-0.000135	5.19E-04
250	250000	6	100000	10	10000	0.0149	0.01052	0.008957	0.00768	0.005653	-0.000134	4.11E-04

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
251	250000	6	100000	10	20000	0.01055	0.006442	0.005172	0.00423	0.002902	-0.000133	3.10E-04
252	250000	6	100000	10	50000	0.007082	0.003319	0.002387	0.00181	0.001138	-0.000132	1.91E-04
253	250000	6	100000	12	5000	0.01962	0.01525	0.01365	0.01227	0.009863	-0.000129	4.26E-04
254	250000	6	100000	12	10000	0.01382	0.009651	0.008277	0.00718	0.005425	-0.00013	3.39E-04
255	250000	6	100000	12	20000	0.00999	0.006023	0.004871	0.00404	0.002842	-0.00013	2.57E-04
256	250000	6	100000	12	50000	0.006918	0.003208	0.002318	0.00178	0.001136	-0.000131	1.59E-04
257	250000	6	100000	14	5000	0.01806	0.01388	0.01247	0.01129	0.009229	-0.000125	3.56E-04
258	250000	6	100000	14	10000	0.01303	0.008957	0.007702	0.00673	0.005187	-0.000127	2.84E-04
259	250000	6	100000	14	20000	0.009534	0.005664	0.004599	0.00385	0.002769	-0.000129	2.15E-04
260	250000	6	100000	14	50000	0.006784	0.003111	0.002253	0.00174	0.00113	-0.000131	1.33E-04
261	250000	6	125000	6	5000	0.02581	0.02052	0.01798	0.01564	0.01166	-0.000137	7.48E-04
262	250000	6	125000	6	10000	0.01717	0.01238	0.01037	0.00866	0.00601	-0.00013	5.93E-04
263	250000	6	125000	6	20000	0.01158	0.007273	0.005757	0.00459	0.002976	-0.000123	4.50E-04
264	250000	6	125000	6	50000	0.007164	0.003468	0.002496	0.00187	0.001137	-0.000116	2.83E-04
265	250000	6	125000	8	5000	0.02269	0.01804	0.01605	0.01422	0.01101	-0.000118	5.84E-04
266	250000	6	125000	8	10000	0.01539	0.01108	0.009447	0.00806	0.005834	-0.000116	4.66E-04
267	250000	6	125000	8	20000	0.01063	0.006656	0.005371	0.00438	0.002957	-0.000114	3.56E-04
268	250000	6	125000	8	50000	0.006848	0.003293	0.00241	0.00184	0.001147	-0.000112	2.25E-04
269	250000	6	125000	10	5000	0.0203	0.01606	0.01442	0.01295	0.01032	-0.000109	4.67E-04
270	250000	6	125000	10	10000	0.01402	0.01002	0.008643	0.00749	0.005606	-0.000109	3.74E-04
271	250000	6	125000	10	20000	0.009901	0.006135	0.005015	0.00416	0.002905	-0.00011	2.87E-04
272	250000	6	125000	10	50000	0.006602	0.00314	0.002321	0.0018	0.001149	-0.000111	1.82E-04
273	250000	6	125000	12	5000	0.0184	0.01443	0.01304	0.01182	0.009631	-0.000104	3.82E-04
274	250000	6	125000	12	10000	0.01294	0.00914	0.007947	0.00697	0.005355	-0.000106	3.06E-04
275	250000	6	125000	12	20000	0.009319	0.005695	0.004694	0.00395	0.002833	-0.000108	2.36E-04
276	250000	6	125000	12	50000	0.006404	0.003005	0.002236	0.00175	0.001145	-0.00011	1.50E-04
277	250000	6	125000	14	5000	0.01686	0.01307	0.01186	0.01082	0.008965	-0.000102	3.18E-04
278	250000	6	125000	14	10000	0.01206	0.008402	0.00734	0.0065	0.005096	-0.000104	2.55E-04
279	250000	6	125000	14	20000	0.008847	0.00532	0.004406	0.00374	0.002749	-0.000106	1.97E-04
280	250000	6	125000	14	50000	0.006243	0.002888	0.002156	0.0017	0.001135	-0.000109	1.26E-04
281	250000	6	150000	6	5000	0.02484	0.01989	0.01754	0.01536	0.01157	-0.000114	6.94E-04
282	250000	6	150000	6	10000	0.01653	0.01203	0.01017	0.00856	0.006008	-0.000109	5.54E-04
283	250000	6	150000	6	20000	0.01114	0.007088	0.005675	0.00456	0.002992	-0.000104	4.25E-04
284	250000	6	150000	6	50000	0.006877	0.00338	0.002474	0.00187	0.001147	-9.95E-05	2.73E-04
285	250000	6	150000	8	5000	0.02173	0.01741	0.01559	0.0139	0.01088	-9.66E-05	5.37E-04
286	250000	6	150000	8	10000	0.01473	0.01071	0.009219	0.00793	0.00581	-9.6E-05	4.32E-04
287	250000	6	150000	8	20000	0.01017	0.006443	0.005267	0.00434	0.002965	-9.57E-05	3.34E-04
288	250000	6	150000	8	50000	0.006521	0.003182	0.002374	0.00183	0.001157	-9.58E-05	2.16E-04
289	250000	6	150000	10	5000	0.01936	0.01543	0.01396	0.01261	0.01015	-8.89E-05	4.28E-04
290	250000	6	150000	10	10000	0.01336	0.009637	0.008399	0.00734	0.005561	-9.04E-05	3.45E-04
291	250000	6	150000	10	20000	0.009413	0.005903	0.004893	0.0041	0.002904	-9.2E-05	2.68E-04
292	250000	6	150000	10	50000	0.006245	0.003009	0.002273	0.00178	0.001158	-9.43E-05	1.74E-04
293	250000	6	150000	12	5000	0.01748	0.01381	0.01258	0.01147	0.009437	-8.54E-05	3.48E-04
294	250000	6	150000	12	10000	0.01228	0.008753	0.007691	0.0068	0.005293	-8.8E-05	2.81E-04
295	250000	6	150000	12	20000	0.008818	0.00545	0.004558	0.00387	0.002822	-9.04E-05	2.19E-04
296	250000	6	150000	12	50000	0.006026	0.002858	0.002176	0.00173	0.00115	-9.36E-05	1.43E-04
297	250000	6	150000	14	5000	0.01596	0.01246	0.01139	0.01046	0.008747	-8.4E-05	2.89E-04
298	250000	6	150000	14	10000	0.0114	0.008014	0.007078	0.00632	0.005019	-8.7E-05	2.34E-04
299	250000	6	150000	14	20000	0.008337	0.005065	0.00426	0.00366	0.00273	-8.98E-05	1.82E-04
300	250000	6	150000	14	50000	0.005847	0.002728	0.002085	0.00168	0.001138	-9.34E-05	1.19E-04

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
301	250000	8	50000	6	5000	0.02577	0.02048	0.01789	0.01552	0.01152	-0.000213	7.31E-04
302	250000	8	50000	6	10000	0.01725	0.01244	0.01036	0.00861	0.005939	-0.000193	5.55E-04
303	250000	8	50000	6	20000	0.01181	0.007445	0.005831	0.0046	0.002947	-0.000176	3.96E-04
304	250000	8	50000	6	50000	0.00764	0.003775	0.002644	0.00192	0.001124	-0.000158	2.23E-04
305	250000	8	50000	8	5000	0.02384	0.01888	0.01659	0.01453	0.01104	-0.000195	6.16E-04
306	250000	8	50000	8	10000	0.01626	0.01166	0.009777	0.00821	0.005798	-0.000181	4.67E-04
307	250000	8	50000	8	20000	0.01139	0.007139	0.005621	0.00447	0.002923	-0.00017	3.32E-04
308	250000	8	50000	8	50000	0.00764	0.003777	0.002648	0.00192	0.001128	-0.000158	1.86E-04
309	250000	8	50000	10	5000	0.02218	0.01746	0.01541	0.01359	0.01052	-0.000183	5.24E-04
310	250000	8	50000	10	10000	0.01541	0.01097	0.009236	0.00781	0.005632	-0.000174	3.97E-04
311	250000	8	50000	10	20000	0.01103	0.006865	0.005422	0.00434	0.002887	-0.000166	2.82E-04
312	250000	8	50000	10	50000	0.00764	0.003778	0.00265	0.00192	0.001131	-0.000158	1.57E-04
313	250000	8	50000	12	5000	0.02076	0.01622	0.01434	0.01272	0.01084	-0.000175	4.49E-04
314	250000	8	50000	12	10000	0.01469	0.01037	0.008745	0.00744	0.006038	-0.000169	3.41E-04
315	250000	8	50000	12	20000	0.01073	0.006622	0.005237	0.00422	0.002842	-0.000163	2.42E-04
316	250000	8	50000	12	50000	0.007639	0.003778	0.002652	0.00193	0.001134	-0.000157	1.35E-04
317	250000	8	50000	14	5000	0.01954	0.01513	0.01339	0.01192	0.009483	-0.000169	3.90E-04
318	250000	8	50000	14	10000	0.01406	0.009833	0.0083	0.00709	0.005266	-0.000165	2.96E-04
319	250000	8	50000	14	20000	0.01046	0.006405	0.005066	0.00409	0.002792	-0.000161	2.10E-04
320	250000	8	50000	14	50000	0.007638	0.003779	0.002653	0.00193	0.001137	-0.000157	1.17E-04
321	250000	8	75000	6	5000	0.02414	0.01931	0.01704	0.01494	0.01132	-0.000172	6.58E-04
322	250000	8	75000	6	10000	0.01619	0.01176	0.009932	0.00837	0.005907	-0.000158	5.12E-04
323	250000	8	75000	6	20000	0.01107	0.007031	0.005607	0.0045	0.002957	-0.000145	3.78E-04
324	250000	8	75000	6	50000	0.00708	0.003501	0.00252	0.00188	0.001136	-0.000131	2.26E-04
325	250000	8	75000	8	5000	0.02199	0.01752	0.01558	0.01381	0.01074	-0.000154	5.43E-04
326	250000	8	75000	8	10000	0.01502	0.01085	0.009241	0.00788	0.005726	-0.000145	4.23E-04
327	250000	8	75000	8	20000	0.0105	0.006622	0.005325	0.00433	0.00292	-0.000137	3.13E-04
328	250000	8	75000	8	50000	0.006961	0.003425	0.002476	0.00186	0.001138	-0.000129	1.86E-04
329	250000	8	75000	10	5000	0.0202	0.01598	0.01429	0.01278	0.01014	-0.000143	4.54E-04
330	250000	8	75000	10	10000	0.01406	0.01006	0.008618	0.00742	0.005519	-0.000138	3.55E-04
331	250000	8	75000	10	20000	0.01004	0.006263	0.005063	0.00415	0.002867	-0.000133	2.62E-04
332	250000	8	75000	10	50000	0.006862	0.003357	0.002433	0.00183	0.001138	-0.000127	1.56E-04
333	250000	8	75000	12	5000	0.01871	0.01467	0.01315	0.01183	0.009545	-0.000136	3.85E-04
334	250000	8	75000	12	10000	0.01325	0.009381	0.008062	0.00699	0.005299	-0.000133	3.01E-04
335	250000	8	75000	12	20000	0.009642	0.005951	0.004823	0.00399	0.002803	-0.00013	2.23E-04
336	250000	8	75000	12	50000	0.00678	0.003297	0.002391	0.00181	0.001134	-0.000127	1.32E-04
337	250000	8	75000	14	5000	0.01744	0.01353	0.01215	0.01097	0.008964	-0.000131	3.30E-04
338	250000	8	75000	14	10000	0.01256	0.008792	0.007567	0.0066	0.005077	-0.000129	2.58E-04
339	250000	8	75000	14	20000	0.00931	0.005677	0.004606	0.00383	0.002733	-0.000128	1.91E-04
340	250000	8	75000	14	50000	0.006709	0.003243	0.002352	0.00178	0.001128	-0.000126	1.14E-04
341	250000	8	100000	6	5000	0.02295	0.01844	0.0164	0.0145	0.01115	-0.000143	6.01E-04
342	250000	8	100000	6	10000	0.01543	0.01127	0.009618	0.00818	0.005876	-0.000132	4.75E-04
343	250000	8	100000	6	20000	0.01055	0.006747	0.005454	0.00443	0.002965	-0.000122	3.58E-04
344	250000	8	100000	6	50000	0.006718	0.003336	0.00245	0.00186	0.001146	-0.000111	2.22E-04
345	250000	8	100000	8	5000	0.0207	0.01657	0.01486	0.0133	0.01051	-0.000126	4.89E-04
346	250000	8	100000	8	10000	0.01417	0.01029	0.008866	0.00765	0.005665	-0.00012	3.88E-04
347	250000	8	100000	8	20000	0.009905	0.006279	0.005129	0.00423	0.002918	-0.000114	2.93E-04
348	250000	8	100000	8	50000	0.006529	0.003215	0.002379	0.00182	0.001148	-0.000108	1.82E-04
349	250000	8	100000	10	5000	0.01887	0.01499	0.01352	0.01221	0.009851	-0.000115	4.05E-04
350	250000	8	100000	10	10000	0.01314	0.009451	0.008201	0.00715	0.005429	-0.000112	3.21E-04

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
351	250000	8	100000	10	20000	0.009377	0.005875	0.004832	0.00403	0.002852	-0.000109	2.43E-04
352	250000	8	100000	10	50000	0.006375	0.003109	0.00231	0.00179	0.001144	-0.000107	1.51E-04
353	250000	8	100000	12	5000	0.01735	0.01365	0.01236	0.01122	0.009208	-0.000109	3.40E-04
354	250000	8	100000	12	10000	0.0123	0.00874	0.007614	0.00669	0.005183	-0.000108	2.70E-04
355	250000	8	100000	12	20000	0.008942	0.005527	0.004564	0.00384	0.002774	-0.000107	2.05E-04
356	250000	8	100000	12	50000	0.006247	0.003014	0.002245	0.00175	0.001136	-0.000106	1.27E-04
357	250000	8	100000	14	5000	0.01607	0.01249	0.01133	0.01034	0.008588	-0.000106	2.90E-04
358	250000	8	100000	14	10000	0.01159	0.008129	0.007097	0.00627	0.004937	-0.000105	2.30E-04
359	250000	8	100000	14	20000	0.008577	0.005226	0.004323	0.00366	0.00269	-0.000105	1.75E-04
360	250000	8	100000	14	50000	0.006139	0.002931	0.002185	0.00171	0.001125	-0.000105	1.09E-04
361	250000	8	125000	6	5000	0.02203	0.01778	0.01591	0.01415	0.011	-0.000121	5.57E-04
362	250000	8	125000	6	10000	0.01484	0.0109	0.009372	0.00803	0.005846	-0.000112	4.44E-04
363	250000	8	125000	6	20000	0.01016	0.006533	0.005337	0.00438	0.00297	-0.000104	3.40E-04
364	250000	8	125000	6	50000	0.006456	0.003221	0.002403	0.00185	0.001154	-9.58E-05	2.16E-04
365	250000	8	125000	8	5000	0.01973	0.01585	0.01432	0.01289	0.01031	-0.000105	4.48E-04
366	250000	8	125000	8	10000	0.01353	0.009867	0.008583	0.00747	0.005612	-0.0001	3.59E-04
367	250000	8	125000	8	20000	0.009461	0.006027	0.004985	0.00416	0.002914	-9.65E-05	2.75E-04
368	250000	8	125000	8	50000	0.00622	0.00307	0.002315	0.0018	0.001155	-9.26E-05	1.76E-04
369	250000	8	125000	10	5000	0.01789	0.01426	0.01296	0.01177	0.009617	-9.55E-05	3.68E-04
370	250000	8	125000	10	10000	0.01248	0.009006	0.007892	0.00695	0.005354	-9.38E-05	2.95E-04
371	250000	8	125000	10	20000	0.0089	0.005596	0.004665	0.00394	0.002837	-9.23E-05	2.27E-04
372	250000	8	125000	10	50000	0.00603	0.002939	0.002229	0.00175	0.001149	-9.09E-05	1.45E-04
373	250000	8	125000	12	5000	0.01637	0.01291	0.01178	0.01077	0.008942	-9.04E-05	3.08E-04
374	250000	8	125000	12	10000	0.01162	0.008279	0.007289	0.00647	0.005089	-9.01E-05	2.47E-04
375	250000	8	125000	12	20000	0.008429	0.005222	0.004376	0.00373	0.002749	-8.93E-05	1.90E-04
376	250000	8	125000	12	50000	0.005874	0.002824	0.002149	0.00171	0.001138	-8.99E-05	1.22E-04
377	250000	8	125000	14	5000	0.0151	0.01175	0.01074	0.00987	0.008295	-8.73E-05	2.61E-04
378	250000	8	125000	14	10000	0.0109	0.007658	0.00676	0.00604	0.004826	-8.8E-05	2.09E-04
379	250000	8	125000	14	20000	0.008059	0.004911	0.004124	0.00354	0.002656	-8.85E-05	1.61E-04
380	250000	8	125000	14	50000	0.005744	0.002723	0.002075	0.00166	0.001123	-8.93E-05	1.04E-04
381	250000	8	150000	6	5000	0.02129	0.01724	0.0155	0.01385	0.01087	-0.000103	5.20E-04
382	250000	8	150000	6	10000	0.01436	0.01059	0.00917	0.00791	0.005817	-9.65E-05	4.18E-04
383	250000	8	150000	6	20000	0.009845	0.006362	0.005243	0.00433	0.002973	-9.03E-05	3.23E-04
384	250000	8	150000	6	50000	0.006253	0.003133	0.002368	0.00184	0.001161	-8.38E-05	2.10E-04
385	250000	8	150000	8	5000	0.01898	0.01529	0.01389	0.01257	0.01015	-8.83E-05	4.16E-04
386	250000	8	150000	8	10000	0.01302	0.009537	0.008357	0.00732	0.005564	-8.54E-05	3.35E-04
387	250000	8	150000	8	20000	0.009114	0.005831	0.004871	0.0041	0.002908	-8.29E-05	2.60E-04
388	250000	8	150000	8	50000	0.005985	0.002962	0.002267	0.00179	0.001161	-8.04E-05	1.70E-04
389	250000	8	150000	10	5000	0.01714	0.01369	0.01251	0.01143	0.009423	-8.04E-05	3.40E-04
390	250000	8	150000	10	10000	0.01196	0.008662	0.007651	0.00678	0.005289	-7.97E-05	2.74E-04
391	250000	8	150000	10	20000	0.008532	0.005382	0.004536	0.00387	0.002824	-7.91E-05	2.13E-04
392	250000	8	150000	10	50000	0.005771	0.002813	0.002169	0.00173	0.001152	-7.87E-05	1.40E-04
393	250000	8	150000	12	5000	0.01562	0.01234	0.01133	0.01041	0.008723	-7.61E-05	2.83E-04
394	250000	8	150000	12	10000	0.0111	0.007928	0.007038	0.00629	0.00501	-7.66E-05	2.28E-04
395	250000	8	150000	12	20000	0.00806	0.005001	0.004238	0.00365	0.002728	-7.7E-05	1.78E-04
396	250000	8	150000	12	50000	0.005596	0.002684	0.002079	0.00167	0.001138	-7.79E-05	1.17E-04
397	250000	8	150000	14	5000	0.01435	0.01119	0.01029	0.0095	0.008056	-7.37E-05	2.39E-04
398	250000	8	150000	14	10000	0.01038	0.007302	0.006502	0.00585	0.004733	-7.49E-05	1.93E-04
399	250000	8	150000	14	20000	0.007668	0.004675	0.003974	0.00345	0.002626	-7.59E-05	1.50E-04
400	250000	8	150000	14	50000	0.005451	0.002571	0.001995	0.00162	0.00112	-7.74E-05	9.87E-05

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
401	250000	10	50000	6	5000	0.02197	0.01773	0.01584	0.01406	0.01189	-0.000165	5.43E-04
402	250000	10	50000	6	10000	0.01487	0.01093	0.009372	0.00801	0.006462	-0.000149	4.16E-04
403	250000	10	50000	6	20000	0.01031	0.006656	0.005409	0.00441	0.003372	-0.000135	3.00E-04
404	250000	10	50000	6	50000	0.006795	0.003466	0.002552	0.00192	0.001356	-0.00012	1.72E-04
405	250000	10	50000	8	5000	0.02058	0.01653	0.01482	0.01323	0.01131	-0.000152	4.69E-04
406	250000	10	50000	8	10000	0.01415	0.01033	0.008896	0.00765	0.00624	-0.000141	3.58E-04
407	250000	10	50000	8	20000	0.01	0.006414	0.005228	0.00428	0.003308	-0.00013	2.57E-04
408	250000	10	50000	8	50000	0.006793	0.003469	0.002558	0.00193	0.001363	-0.000119	1.44E-04
409	250000	10	50000	10	5000	0.01935	0.01544	0.01387	0.01244	0.01072	-0.000144	4.07E-04
410	250000	10	50000	10	10000	0.01352	0.009794	0.00845	0.0073	0.006011	-0.000135	3.10E-04
411	250000	10	50000	10	20000	0.009732	0.006196	0.005058	0.00416	0.003239	-0.000127	2.21E-04
412	250000	10	50000	10	50000	0.006795	0.003468	0.002556	0.00192	0.001164	-0.00012	1.25E-04
413	250000	10	50000	12	5000	0.01826	0.01445	0.013	0.0117	0.009426	-0.000137	3.56E-04
414	250000	10	50000	12	10000	0.01296	0.009311	0.00804	0.00697	0.005267	-0.000131	2.71E-04
415	250000	10	50000	12	20000	0.009496	0.005999	0.004899	0.00404	0.002816	-0.000125	1.93E-04
416	250000	10	50000	12	50000	0.006795	0.003469	0.002557	0.00193	0.001166	-0.00012	1.08E-04
417	250000	10	50000	14	5000	0.01728	0.01356	0.0122	0.011	0.008934	-0.000133	3.14E-04
418	250000	10	50000	14	10000	0.01247	0.008877	0.007665	0.00666	0.005079	-0.000128	2.38E-04
419	250000	10	50000	14	20000	0.009289	0.005822	0.004753	0.00393	0.002759	-0.000124	1.70E-04
420	250000	10	50000	14	50000	0.006794	0.003469	0.002558	0.00193	0.001168	-0.00012	9.47E-05
421	250000	10	75000	6	5000	0.0208	0.01681	0.01513	0.01353	0.01065	-0.000138	4.97E-04
422	250000	10	75000	6	10000	0.01411	0.01039	0.008992	0.00776	0.005723	-0.000125	3.89E-04
423	250000	10	75000	6	20000	0.009787	0.006316	0.005194	0.00429	0.002941	-0.000114	2.90E-04
424	250000	10	75000	6	50000	0.006399	0.003233	0.002421	0.00186	0.001157	-0.000101	1.75E-04
425	250000	10	75000	8	5000	0.01922	0.01544	0.01396	0.01257	0.01008	-0.000124	4.21E-04
426	250000	10	75000	8	10000	0.01325	0.009674	0.008418	0.00733	0.005517	-0.000116	3.29E-04
427	250000	10	75000	8	20000	0.009363	0.005987	0.004949	0.00412	0.002884	-0.000108	2.45E-04
428	250000	10	75000	8	50000	0.006308	0.003169	0.002379	0.00183	0.001154	-9.96E-05	1.47E-04
429	250000	10	75000	10	5000	0.01784	0.01422	0.01289	0.01168	0.009503	-0.000115	3.60E-04
430	250000	10	75000	10	10000	0.01251	0.009044	0.007895	0.00692	0.005297	-0.000109	2.81E-04
431	250000	10	75000	10	20000	0.009003	0.005696	0.004721	0.00396	0.002817	-0.000104	2.09E-04
432	250000	10	75000	10	50000	0.006232	0.003112	0.00234	0.00181	0.00115	-9.86E-05	1.25E-04
433	250000	10	75000	12	5000	0.01665	0.01315	0.01193	0.01085	0.008931	-0.000109	3.10E-04
434	250000	10	75000	12	10000	0.01187	0.008489	0.007423	0.00653	0.005073	-0.000105	2.43E-04
435	250000	10	75000	12	20000	0.008694	0.005438	0.004513	0.0038	0.002743	-0.000102	1.80E-04
436	250000	10	75000	12	50000	0.006167	0.003061	0.002302	0.00178	0.001143	-9.8E-05	1.07E-04
437	250000	10	75000	14	5000	0.01561	0.01219	0.01107	0.01009	0.008375	-0.000105	2.70E-04
438	250000	10	75000	14	10000	0.01132	0.007999	0.006997	0.00618	0.004851	-0.000102	2.11E-04
439	250000	10	75000	14	20000	0.008427	0.00521	0.004324	0.00365	0.002667	-9.99E-05	1.57E-04
440	250000	10	75000	14	50000	0.00611	0.003016	0.002267	0.00176	0.001135	-9.75E-05	9.34E-05
441	250000	10	100000	6	5000	0.01992	0.01612	0.01458	0.01312	0.01045	-0.000117	4.60E-04
442	250000	10	100000	6	10000	0.01355	0.009987	0.008706	0.00757	0.005662	-0.000107	3.65E-04
443	250000	10	100000	6	20000	0.009411	0.006076	0.005044	0.0042	0.002931	-9.74E-05	2.77E-04
444	250000	10	100000	6	50000	0.006139	0.003088	0.002344	0.00182	0.001159	-8.73E-05	1.74E-04
445	250000	10	100000	8	5000	0.01822	0.01465	0.01332	0.01208	0.009815	-0.000103	3.84E-04
446	250000	10	100000	8	10000	0.0126	0.009204	0.008076	0.00709	0.005427	-9.7E-05	3.05E-04
447	250000	10	100000	8	20000	0.00892	0.005695	0.004759	0.00401	0.002861	-9.11E-05	2.31E-04
448	250000	10	100000	8	50000	0.005993	0.002986	0.002277	0.00179	0.001154	-8.5E-05	1.45E-04
449	250000	10	100000	10	5000	0.01679	0.01337	0.0122	0.01113	0.009182	-9.48E-05	3.25E-04
450	250000	10	100000	10	10000	0.01181	0.008526	0.007511	0.00664	0.00518	-9.09E-05	2.58E-04

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
451	250000	10	100000	10	20000	0.008509	0.005363	0.004499	0.00382	0.002781	-8.73E-05	1.96E-04
452	250000	10	100000	10	50000	0.005872	0.002895	0.002213	0.00175	0.001145	-8.36E-05	1.22E-04
453	250000	10	100000	12	5000	0.01556	0.01226	0.0112	0.01026	0.008565	-8.94E-05	2.78E-04
454	250000	10	100000	12	10000	0.01113	0.007937	0.007007	0.00623	0.004932	-8.7E-05	2.20E-04
455	250000	10	100000	12	20000	0.008161	0.005073	0.004264	0.00364	0.002695	-8.49E-05	1.67E-04
456	250000	10	100000	12	50000	0.00577	0.002815	0.002154	0.00171	0.001133	-8.27E-05	1.04E-04
457	250000	10	100000	14	5000	0.01449	0.01127	0.01031	0.00947	0.007972	-8.57E-05	2.40E-04
458	250000	10	100000	14	10000	0.01055	0.007421	0.006556	0.00585	0.004688	-8.45E-05	1.91E-04
459	250000	10	100000	14	20000	0.007864	0.004818	0.004053	0.00347	0.002606	-8.33E-05	1.45E-04
460	250000	10	100000	14	50000	0.005682	0.002745	0.002099	0.00167	0.001119	-8.21E-05	9.02E-05
461	250000	10	125000	6	5000	0.01921	0.01557	0.01414	0.01278	0.01027	-0.000101	4.29E-04
462	250000	10	125000	6	10000	0.01311	0.009669	0.008478	0.00742	0.005609	-9.25E-05	3.43E-04
463	250000	10	125000	6	20000	0.00912	0.005891	0.004928	0.00414	0.002922	-8.48E-05	2.65E-04
464	250000	10	125000	6	50000	0.005947	0.002984	0.002291	0.0018	0.001162	-7.64E-05	1.70E-04
465	250000	10	125000	8	5000	0.01746	0.01404	0.01283	0.0117	0.009595	-8.76E-05	3.55E-04
466	250000	10	125000	8	10000	0.01211	0.008845	0.007812	0.00691	0.005352	-8.28E-05	2.84E-04
467	250000	10	125000	8	20000	0.008585	0.005476	0.004617	0.00392	0.002843	-7.83E-05	2.19E-04
468	250000	10	125000	8	50000	0.005765	0.002856	0.002207	0.00175	0.001155	-7.37E-05	1.41E-04
469	250000	10	125000	10	5000	0.016	0.01273	0.01168	0.01071	0.008924	-7.98E-05	2.98E-04
470	250000	10	125000	10	10000	0.01128	0.008139	0.007222	0.00644	0.005086	-7.71E-05	2.38E-04
471	250000	10	125000	10	20000	0.008143	0.005118	0.004336	0.00372	0.002753	-7.46E-05	1.84E-04
472	250000	10	125000	10	50000	0.005615	0.002744	0.002128	0.0017	0.001143	-7.21E-05	1.18E-04
473	250000	10	125000	12	5000	0.01475	0.0116	0.01066	0.00982	0.008277	-7.5E-05	2.53E-04
474	250000	10	125000	12	10000	0.01059	0.007531	0.0067	0.00601	0.00482	-7.36E-05	2.03E-04
475	250000	10	125000	12	20000	0.007773	0.004809	0.004085	0.00353	0.002657	-7.24E-05	1.56E-04
476	250000	10	125000	12	50000	0.005489	0.002646	0.002054	0.00165	0.001127	-7.12E-05	1.01E-04
477	250000	10	125000	14	5000	0.01367	0.0106	0.009745	0.00901	0.007659	-7.18E-05	2.18E-04
478	250000	10	125000	14	10000	0.009997	0.007002	0.006236	0.00561	0.004561	-7.13E-05	1.75E-04
479	250000	10	125000	14	20000	0.007459	0.004539	0.00386	0.00335	0.002559	-7.09E-05	1.35E-04
480	250000	10	125000	14	50000	0.005382	0.002559	0.001987	0.00161	0.001108	-7.06E-05	8.65E-05
481	250000	10	150000	6	5000	0.01864	0.01511	0.01378	0.0125	0.01012	-8.77E-05	4.04E-04
482	250000	10	150000	6	10000	0.01275	0.009408	0.00829	0.00729	0.005562	-8.08E-05	3.25E-04
483	250000	10	150000	6	20000	0.008884	0.005741	0.004834	0.00409	0.002914	-7.45E-05	2.53E-04
484	250000	10	150000	6	50000	0.005798	0.002904	0.002251	0.00179	0.001165	-6.76E-05	1.66E-04
485	250000	10	150000	8	5000	0.01686	0.01356	0.01244	0.01138	0.009409	-7.52E-05	3.31E-04
486	250000	10	150000	8	10000	0.01172	0.008557	0.007599	0.00676	0.005287	-7.15E-05	2.67E-04
487	250000	10	150000	8	20000	0.008319	0.005303	0.004504	0.00386	0.002827	-6.81E-05	2.08E-04
488	250000	10	150000	8	50000	0.005589	0.002758	0.002154	0.00173	0.001156	-6.46E-05	1.37E-04
489	250000	10	150000	10	5000	0.01537	0.01223	0.01126	0.01038	0.008711	-6.81E-05	2.76E-04
490	250000	10	150000	10	10000	0.01087	0.007836	0.006994	0.00627	0.005006	-6.63E-05	2.23E-04
491	250000	10	150000	10	20000	0.007857	0.004928	0.004209	0.00364	0.002729	-6.46E-05	1.74E-04
492	250000	10	150000	10	50000	0.005418	0.00263	0.002064	0.00167	0.001141	-6.31E-05	1.14E-04
493	250000	10	150000	12	5000	0.01412	0.01108	0.01023	0.00947	0.008041	-6.39E-05	2.34E-04
494	250000	10	150000	12	10000	0.01017	0.007217	0.006461	0.00583	0.004728	-6.32E-05	1.89E-04
495	250000	10	150000	12	20000	0.007473	0.004606	0.003947	0.00344	0.002626	-6.26E-05	1.47E-04
496	250000	10	150000	12	50000	0.005276	0.002519	0.001981	0.00162	0.001122	-6.22E-05	9.68E-05
497	250000	10	150000	14	5000	0.01304	0.01008	0.00931	0.00864	0.007406	-6.12E-05	2.00E-04
498	250000	10	150000	14	10000	0.009569	0.006681	0.005988	0.00543	0.004456	-6.13E-05	1.62E-04
499	250000	10	150000	14	20000	0.007149	0.004327	0.003713	0.00325	0.002521	-6.14E-05	1.26E-04
500	250000	10	150000	14	50000	0.005156	0.002422	0.001905	0.00156	0.0011	-6.17E-05	8.30E-05

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
501	250000	12	50000	6	5000	0.01914	0.0155	0.01407	0.0127	0.01019	-0.00013	4.19E-04
502	250000	12	50000	6	10000	0.01311	0.009676	0.008473	0.0074	0.005575	-0.000117	3.23E-04
503	250000	12	50000	6	20000	0.009222	0.005978	0.004988	0.00417	0.002921	-0.000105	2.35E-04
504	250000	12	50000	6	50000	0.006202	0.00318	0.002426	0.00188	0.001179	-9.26E-05	1.36E-04
505	250000	12	50000	8	5000	0.01811	0.01458	0.01326	0.01202	0.009745	-0.000121	3.69E-04
506	250000	12	50000	8	10000	0.01257	0.009213	0.008084	0.00709	0.005405	-0.000111	2.83E-04
507	250000	12	50000	8	20000	0.008987	0.005785	0.004834	0.00406	0.002872	-0.000102	2.04E-04
508	250000	12	50000	8	50000	0.006202	0.003181	0.002428	0.00188	0.001182	-9.25E-05	1.17E-04
509	250000	12	50000	10	5000	0.01716	0.01372	0.01249	0.01135	0.009283	-0.000114	3.26E-04
510	250000	12	50000	10	10000	0.01209	0.008785	0.007717	0.00679	0.005226	-0.000106	2.48E-04
511	250000	12	50000	10	20000	0.008778	0.005608	0.00469	0.00395	0.002818	-9.94E-05	1.78E-04
512	250000	12	50000	10	50000	0.006202	0.003182	0.002429	0.00189	0.001184	-9.24E-05	1.01E-04
513	250000	12	50000	12	5000	0.01629	0.01292	0.01177	0.01071	0.008819	-0.000109	2.89E-04
514	250000	12	50000	12	10000	0.01165	0.008393	0.007374	0.0065	0.005045	-0.000103	2.20E-04
515	250000	12	50000	12	20000	0.008591	0.005447	0.004555	0.00384	0.002762	-9.77E-05	1.57E-04
516	250000	12	50000	12	50000	0.006201	0.003182	0.00243	0.00189	0.001186	-9.23E-05	8.87E-05
517	250000	12	50000	14	5000	0.0155	0.01218	0.01109	0.01011	0.008362	-0.000105	2.58E-04
518	250000	12	50000	14	10000	0.01125	0.008035	0.007056	0.00623	0.004864	-0.000101	1.96E-04
519	250000	12	50000	14	20000	0.008425	0.005301	0.004429	0.00374	0.002704	-9.64E-05	1.40E-04
520	250000	12	50000	14	50000	0.006201	0.003182	0.00243	0.00189	0.001187	-9.22E-05	7.85E-05
521	250000	12	75000	6	5000	0.01827	0.01478	0.01348	0.01224	0.00993	-0.000111	3.88E-04
522	250000	12	75000	6	10000	0.01256	0.009246	0.008146	0.00716	0.005477	-9.97E-05	3.05E-04
523	250000	12	75000	6	20000	0.008835	0.005701	0.004794	0.00405	0.002886	-8.98E-05	2.29E-04
524	250000	12	75000	6	50000	0.005907	0.002984	0.002301	0.00181	0.001167	-7.91E-05	1.40E-04
525	250000	12	75000	8	5000	0.01706	0.0137	0.01253	0.01143	0.009392	-0.0001	3.35E-04
526	250000	12	75000	8	10000	0.01189	0.008679	0.007671	0.00679	0.005266	-9.24E-05	2.63E-04
527	250000	12	75000	8	20000	0.008508	0.005434	0.004583	0.00389	0.002818	-8.53E-05	1.96E-04
528	250000	12	75000	8	50000	0.005837	0.002931	0.002263	0.00179	0.001161	-7.79E-05	1.19E-04
529	250000	12	75000	10	5000	0.01597	0.01271	0.01164	0.01066	0.008848	-9.3E-05	2.92E-04
530	250000	12	75000	10	10000	0.01131	0.008168	0.007232	0.00642	0.005049	-8.74E-05	2.28E-04
531	250000	12	75000	10	20000	0.008224	0.005195	0.004388	0.00374	0.002744	-8.24E-05	1.70E-04
532	250000	12	75000	10	50000	0.005776	0.002883	0.002228	0.00176	0.001153	-7.7E-05	1.02E-04
533	250000	12	75000	12	5000	0.015	0.01182	0.01083	0.00994	0.008312	-8.8E-05	2.56E-04
534	250000	12	75000	12	10000	0.0108	0.007709	0.00683	0.00609	0.00483	-8.4E-05	2.00E-04
535	250000	12	75000	12	20000	0.007975	0.00498	0.004208	0.0036	0.002668	-8.03E-05	1.48E-04
536	250000	12	75000	12	50000	0.005723	0.00284	0.002194	0.00174	0.001145	-7.65E-05	8.91E-05
537	250000	12	75000	14	5000	0.01413	0.011	0.01008	0.00926	0.007791	-8.44E-05	2.26E-04
538	250000	12	75000	14	10000	0.01034	0.007296	0.006461	0.00577	0.004615	-8.15E-05	1.76E-04
539	250000	12	75000	14	20000	0.007756	0.004788	0.004044	0.00347	0.00259	-7.88E-05	1.31E-04
540	250000	12	75000	14	50000	0.005677	0.002801	0.002163	0.00172	0.001135	-7.61E-05	7.82E-05
541	250000	12	100000	6	5000	0.01759	0.01422	0.01301	0.01186	0.009712	-9.54E-05	3.62E-04
542	250000	12	100000	6	10000	0.01213	0.008917	0.007895	0.00698	0.005399	-8.65E-05	2.88E-04
543	250000	12	100000	6	20000	0.008552	0.005501	0.004656	0.00396	0.002862	-7.81E-05	2.20E-04
544	250000	12	100000	6	50000	0.005712	0.00286	0.002226	0.00177	0.001162	-6.9E-05	1.39E-04
545	250000	12	100000	8	5000	0.01627	0.01304	0.01197	0.01098	0.009112	-8.48E-05	3.09E-04
546	250000	12	100000	8	10000	0.01139	0.008287	0.007367	0.00656	0.00516	-7.87E-05	2.45E-04
547	250000	12	100000	8	20000	0.008169	0.005188	0.00441	0.00378	0.002781	-7.31E-05	1.87E-04
548	250000	12	100000	8	50000	0.005598	0.002774	0.002164	0.00173	0.001152	-6.71E-05	1.18E-04
549	250000	12	100000	10	5000	0.01511	0.01198	0.01102	0.01015	0.008515	-7.78E-05	2.66E-04
550	250000	12	100000	10	10000	0.01076	0.007729	0.006887	0.00616	0.004916	-7.36E-05	2.11E-04

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
551	250000	12	100000	10	20000	0.00784	0.004912	0.004184	0.00361	0.002695	-6.99E-05	1.61E-04
552	250000	12	100000	10	50000	0.0055	0.002697	0.002107	0.00169	0.001139	-6.59E-05	1.01E-04
553	250000	12	100000	12	5000	0.01409	0.01104	0.01016	0.00938	0.007934	-7.31E-05	2.31E-04
554	250000	12	100000	12	10000	0.0102	0.007235	0.006452	0.0058	0.004674	-7.03E-05	1.83E-04
555	250000	12	100000	12	20000	0.007557	0.004668	0.003979	0.00344	0.002605	-6.77E-05	1.39E-04
556	250000	12	100000	12	50000	0.005417	0.002629	0.002053	0.00166	0.001124	-6.51E-05	8.71E-05
557	250000	12	100000	14	5000	0.01318	0.01019	0.009373	0.00866	0.007376	-6.98E-05	2.02E-04
558	250000	12	100000	14	10000	0.009719	0.006793	0.006058	0.00546	0.004438	-6.79E-05	1.60E-04
559	250000	12	100000	14	20000	0.00731	0.004451	0.003793	0.00329	0.002515	-6.63E-05	1.22E-04
560	250000	12	100000	14	50000	0.005344	0.002568	0.002004	0.00162	0.001108	-6.46E-05	7.61E-05
561	250000	12	125000	6	5000	0.01703	0.01375	0.01263	0.01155	0.009526	-8.34E-05	3.40E-04
562	250000	12	125000	6	10000	0.01178	0.008651	0.007692	0.00683	0.005333	-7.58E-05	2.73E-04
563	250000	12	125000	6	20000	0.008329	0.005343	0.004548	0.00389	0.002843	-6.88E-05	2.11E-04
564	250000	12	125000	6	50000	0.005567	0.00277	0.002172	0.00174	0.00116	-6.09E-05	1.37E-04
565	250000	12	125000	8	5000	0.01565	0.01252	0.01153	0.01061	0.00888	-7.28E-05	2.87E-04
566	250000	12	125000	8	10000	0.011	0.007981	0.007129	0.00638	0.005072	-6.79E-05	2.30E-04
567	250000	12	125000	8	20000	0.007908	0.005001	0.004277	0.00369	0.002753	-6.34E-05	1.78E-04
568	250000	12	125000	8	50000	0.005423	0.002661	0.002095	0.00169	0.001147	-5.86E-05	1.15E-04
569	250000	12	125000	10	5000	0.01445	0.01142	0.01054	0.00975	0.008246	-6.62E-05	2.46E-04
570	250000	12	125000	10	10000	0.01033	0.007395	0.006623	0.00596	0.00481	-6.31E-05	1.97E-04
571	250000	12	125000	10	20000	0.007551	0.004701	0.004032	0.0035	0.002656	-6.02E-05	1.52E-04
572	250000	12	125000	10	50000	0.005301	0.002566	0.002023	0.00165	0.00113	-5.73E-05	9.80E-05
573	250000	12	125000	12	5000	0.0134	0.01045	0.009653	0.00895	0.007635	-6.19E-05	2.12E-04
574	250000	12	125000	12	10000	0.009759	0.006879	0.006168	0.00558	0.004551	-5.99E-05	1.70E-04
575	250000	12	125000	12	20000	0.007247	0.004439	0.003811	0.00333	0.002558	-5.82E-05	1.31E-04
576	250000	12	125000	12	50000	0.005197	0.002481	0.001957	0.0016	0.001111	-5.64E-05	8.44E-05
577	250000	12	125000	14	5000	0.01247	0.009581	0.008847	0.00822	0.007053	-5.89E-05	1.85E-04
578	250000	12	125000	14	10000	0.009258	0.006422	0.005759	0.00522	0.0043	-5.78E-05	1.48E-04
579	250000	12	125000	14	20000	0.006984	0.004207	0.003612	0.00316	0.002459	-5.68E-05	1.14E-04
580	250000	12	125000	14	50000	0.005108	0.002406	0.001896	0.00155	0.00109	-5.59E-05	7.34E-05
581	250000	12	150000	6	5000	0.01657	0.01337	0.0123	0.01129	0.009364	-7.36E-05	3.22E-04
582	250000	12	150000	6	10000	0.0115	0.00843	0.007521	0.00671	0.005275	-6.71E-05	2.60E-04
583	250000	12	150000	6	20000	0.008145	0.005214	0.004458	0.00383	0.002827	-6.1E-05	2.03E-04
584	250000	12	150000	6	50000	0.005453	0.002699	0.002131	0.00172	0.001159	-5.43E-05	1.34E-04
585	250000	12	150000	8	5000	0.01515	0.01209	0.01117	0.01032	0.008684	-6.33E-05	2.70E-04
586	250000	12	150000	8	10000	0.01069	0.007732	0.006934	0.00624	0.004998	-5.93E-05	2.18E-04
587	250000	12	150000	8	20000	0.007698	0.00485	0.00417	0.00362	0.002728	-5.57E-05	1.70E-04
588	250000	12	150000	8	50000	0.005287	0.002574	0.002042	0.00167	0.001144	-5.18E-05	1.12E-04
589	250000	12	150000	10	5000	0.01392	0.01097	0.01016	0.00942	0.008022	-5.71E-05	2.29E-04
590	250000	12	150000	10	10000	0.009998	0.007128	0.006411	0.0058	0.004721	-5.47E-05	1.85E-04
591	250000	12	150000	10	20000	0.007323	0.004535	0.003912	0.00342	0.002625	-5.26E-05	1.44E-04
592	250000	12	150000	10	50000	0.005147	0.002465	0.00196	0.00161	0.001124	-5.04E-05	9.51E-05
593	250000	12	150000	12	5000	0.01286	0.009983	0.00925	0.00861	0.007389	-5.31E-05	1.97E-04
594	250000	12	150000	12	10000	0.00941	0.0066	0.005944	0.0054	0.004449	-5.18E-05	1.59E-04
595	250000	12	150000	12	20000	0.007005	0.00426	0.003681	0.00324	0.002519	-5.06E-05	1.24E-04
596	250000	12	150000	12	50000	0.00503	0.002369	0.001885	0.00156	0.001102	-4.96E-05	8.16E-05
597	250000	12	150000	14	5000	0.01192	0.009105	0.008433	0.00786	0.006791	-5.05E-05	1.71E-04
598	250000	12	150000	14	10000	0.008899	0.006133	0.005525	0.00504	0.004187	-4.99E-05	1.38E-04
599	250000	12	150000	14	20000	0.006731	0.004019	0.003473	0.00306	0.002414	-4.94E-05	1.07E-04
600	250000	12	150000	14	50000	0.004929	0.002285	0.001816	0.0015	0.001078	-4.9E-05	7.07E-05

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
601	250000	14	50000	6	5000	0.01696	0.01368	0.01256	0.01148	0.009455	-0.000104	3.33E-04
602	250000	14	50000	6	10000	0.01177	0.008643	0.007679	0.00682	0.005304	-9.33E-05	2.58E-04
603	250000	14	50000	6	20000	0.0084	0.005405	0.004594	0.00392	0.002848	-8.34E-05	1.89E-04
604	250000	14	50000	6	50000	0.005765	0.002929	0.002291	0.00182	0.001186	-7.29E-05	1.11E-04
605	250000	14	50000	8	5000	0.01616	0.01296	0.0119	0.01091	0.009046	-9.73E-05	2.97E-04
606	250000	14	50000	8	10000	0.01136	0.008274	0.007359	0.00655	0.00514	-8.86E-05	2.29E-04
607	250000	14	50000	8	20000	0.008216	0.005249	0.004465	0.00382	0.002796	-8.08E-05	1.66E-04
608	250000	14	50000	8	50000	0.005765	0.00293	0.002292	0.00182	0.001188	-7.28E-05	9.59E-05
609	250000	14	50000	10	5000	0.0154	0.01226	0.01126	0.01034	0.008624	-9.22E-05	2.66E-04
610	250000	14	50000	10	10000	0.01097	0.007927	0.007053	0.00629	0.004971	-8.51E-05	2.04E-04
611	250000	14	50000	10	20000	0.008049	0.005104	0.004342	0.00372	0.002741	-7.9E-05	1.47E-04
612	250000	14	50000	10	50000	0.005765	0.00293	0.002293	0.00183	0.001189	-7.27E-05	8.39E-05
613	250000	14	50000	12	5000	0.01469	0.01159	0.01065	0.00979	0.0082	-8.82E-05	2.39E-04
614	250000	14	50000	12	10000	0.01061	0.007604	0.006764	0.00604	0.004799	-8.25E-05	1.82E-04
615	250000	14	50000	12	20000	0.007899	0.00497	0.004226	0.00363	0.002684	-7.76E-05	1.31E-04
616	250000	14	50000	12	50000	0.005764	0.00293	0.002293	0.00183	0.001191	-7.26E-05	7.42E-05
617	250000	14	50000	14	5000	0.01403	0.01097	0.01007	0.00926	0.00778	-8.51E-05	2.16E-04
618	250000	14	50000	14	10000	0.01029	0.007305	0.006492	0.0058	0.004629	-8.05E-05	1.64E-04
619	250000	14	50000	14	20000	0.007762	0.004848	0.004118	0.00354	0.002628	-7.66E-05	1.17E-04
620	250000	14	50000	14	50000	0.005764	0.00293	0.002294	0.00183	0.001192	-7.26E-05	6.62E-05
621	250000	14	75000	6	5000	0.01628	0.0131	0.01206	0.01107	0.009193	-9E-05	3.11E-04
622	250000	14	75000	6	10000	0.01135	0.008296	0.007401	0.0066	0.005198	-8.07E-05	2.46E-04
623	250000	14	75000	6	20000	0.008104	0.005178	0.004425	0.0038	0.002802	-7.22E-05	1.85E-04
624	250000	14	75000	6	50000	0.005538	0.002765	0.002177	0.00175	0.001165	-6.29E-05	1.14E-04
625	250000	14	75000	8	5000	0.01532	0.01223	0.01127	0.01038	0.008697	-8.2E-05	2.74E-04
626	250000	14	75000	8	10000	0.01082	0.007837	0.007005	0.00628	0.004994	-7.5E-05	2.15E-04
627	250000	14	75000	8	20000	0.007845	0.004959	0.004244	0.00366	0.00273	-6.86E-05	1.61E-04
628	250000	14	75000	8	50000	0.005481	0.00272	0.002143	0.00173	0.001157	-6.19E-05	9.83E-05
629	250000	14	75000	10	5000	0.01444	0.01141	0.01052	0.00971	0.008195	-7.63E-05	2.41E-04
630	250000	14	75000	10	10000	0.01035	0.007415	0.006633	0.00596	0.004785	-7.09E-05	1.89E-04
631	250000	14	75000	10	20000	0.007615	0.00476	0.004076	0.00353	0.002655	-6.62E-05	1.41E-04
632	250000	14	75000	10	50000	0.005432	0.002679	0.002111	0.0017	0.001148	-6.12E-05	8.55E-05
633	250000	14	75000	12	5000	0.01363	0.01065	0.009821	0.00908	0.007699	-7.21E-05	2.14E-04
634	250000	14	75000	12	10000	0.009931	0.007029	0.006287	0.00566	0.004577	-6.81E-05	1.67E-04
635	250000	14	75000	12	20000	0.007411	0.00458	0.00392	0.0034	0.002579	-6.45E-05	1.25E-04
636	250000	14	75000	12	50000	0.005388	0.002643	0.002081	0.00168	0.001138	-6.07E-05	7.51E-05
637	250000	14	75000	14	5000	0.01288	0.00995	0.009166	0.00848	0.007217	-6.9E-05	1.91E-04
638	250000	14	75000	14	10000	0.009549	0.006676	0.005966	0.00538	0.004373	-6.59E-05	1.49E-04
639	250000	14	75000	14	20000	0.007228	0.004416	0.003777	0.00328	0.002502	-6.32E-05	1.11E-04
640	250000	14	75000	14	50000	0.005349	0.002609	0.002053	0.00166	0.001127	-6.04E-05	6.66E-05
641	250000	14	100000	6	5000	0.01573	0.01263	0.01166	0.01073	0.008975	-7.87E-05	2.92E-04
642	250000	14	100000	6	10000	0.01101	0.008024	0.007184	0.00644	0.005112	-7.08E-05	2.33E-04
643	250000	14	100000	6	20000	0.007884	0.005011	0.004301	0.00372	0.00277	-6.35E-05	1.79E-04
644	250000	14	100000	6	50000	0.005386	0.002659	0.002106	0.00171	0.001155	-5.53E-05	1.14E-04
645	250000	14	100000	8	5000	0.01468	0.01166	0.01078	0.00997	0.008416	-7.03E-05	2.54E-04
646	250000	14	100000	8	10000	0.01043	0.007508	0.006737	0.00607	0.00488	-6.45E-05	2.02E-04
647	250000	14	100000	8	20000	0.007577	0.004753	0.004089	0.00355	0.002685	-5.93E-05	1.54E-04
648	250000	14	100000	8	50000	0.005294	0.002586	0.00205	0.00167	0.001141	-5.37E-05	9.76E-05
649	250000	14	100000	10	5000	0.01372	0.01078	0.009969	0.00924	0.007861	-6.45E-05	2.22E-04
650	250000	14	100000	10	10000	0.009906	0.007041	0.006325	0.00572	0.004645	-6.03E-05	1.76E-04

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
651	250000	14	100000	10	20000	0.007309	0.004521	0.003893	0.0034	0.002597	-5.66E-05	1.34E-04
652	250000	14	100000	10	50000	0.005214	0.002521	0.001999	0.00163	0.001126	-5.27E-05	8.45E-05
653	250000	14	100000	12	5000	0.01285	0.009965	0.009216	0.00855	0.00732	-6.05E-05	1.95E-04
654	250000	14	100000	12	10000	0.009443	0.00662	0.005947	0.00539	0.004414	-5.75E-05	1.55E-04
655	250000	14	100000	12	20000	0.007074	0.004313	0.003714	0.00325	0.002508	-5.48E-05	1.18E-04
656	250000	14	100000	12	50000	0.005145	0.002462	0.001951	0.0016	0.001109	-5.2E-05	7.38E-05
657	250000	14	100000	14	5000	0.01207	0.009224	0.008521	0.00792	0.006801	-5.75E-05	1.73E-04
658	250000	14	100000	14	10000	0.00903	0.006238	0.005599	0.00508	0.004188	-5.54E-05	1.37E-04
659	250000	14	100000	14	20000	0.006866	0.004127	0.00355	0.00311	0.002419	-5.35E-05	1.04E-04
660	250000	14	100000	14	50000	0.005084	0.002409	0.001907	0.00156	0.001092	-5.16E-05	6.51E-05
661	250000	14	125000	6	5000	0.01528	0.01224	0.01132	0.01045	0.008786	-6.96E-05	2.76E-04
662	250000	14	125000	6	10000	0.01074	0.007801	0.007004	0.0063	0.005039	-6.27E-05	2.22E-04
663	250000	14	125000	6	20000	0.007708	0.004878	0.004203	0.00365	0.002745	-5.63E-05	1.72E-04
664	250000	14	125000	6	50000	0.005273	0.002581	0.002055	0.00168	0.001149	-4.92E-05	1.12E-04
665	250000	14	125000	8	5000	0.01416	0.01121	0.01039	0.00963	0.008182	-6.1E-05	2.38E-04
666	250000	14	125000	8	10000	0.01011	0.007246	0.006524	0.0059	0.004786	-5.62E-05	1.90E-04
667	250000	14	125000	8	20000	0.007369	0.004592	0.003968	0.00347	0.00265	-5.19E-05	1.47E-04
668	250000	14	125000	8	50000	0.005156	0.002489	0.001985	0.00163	0.001132	-4.73E-05	9.58E-05
669	250000	14	125000	10	5000	0.01315	0.01028	0.009531	0.00886	0.007589	-5.54E-05	2.06E-04
670	250000	14	125000	10	10000	0.009556	0.006751	0.006086	0.00553	0.004532	-5.21E-05	1.65E-04
671	250000	14	125000	10	20000	0.007076	0.004339	0.003754	0.0033	0.002552	-4.92E-05	1.27E-04
672	250000	14	125000	10	50000	0.005056	0.002407	0.00192	0.00158	0.001112	-4.61E-05	8.26E-05
673	250000	14	125000	12	5000	0.01226	0.009436	0.008747	0.00815	0.007018	-5.16E-05	1.80E-04
674	250000	14	125000	12	10000	0.00907	0.006307	0.005687	0.00518	0.004284	-4.93E-05	1.44E-04
675	250000	14	125000	12	20000	0.006821	0.004114	0.00356	0.00314	0.002454	-4.73E-05	1.11E-04
676	250000	14	125000	12	50000	0.004969	0.002333	0.001861	0.00154	0.001091	-4.53E-05	7.19E-05
677	250000	14	125000	14	5000	0.01145	0.008673	0.008031	0.00749	0.006476	-4.89E-05	1.58E-04
678	250000	14	125000	14	10000	0.008639	0.005908	0.005323	0.00485	0.004044	-4.74E-05	1.27E-04
679	250000	14	125000	14	20000	0.006597	0.003913	0.003383	0.00299	0.002357	-4.61E-05	9.78E-05
680	250000	14	125000	14	50000	0.004893	0.002268	0.001806	0.0015	0.001069	-4.48E-05	6.31E-05
681	250000	14	150000	6	5000	0.0149	0.01191	0.01103	0.01021	0.008621	-6.2E-05	2.62E-04
682	250000	14	150000	6	10000	0.01051	0.007612	0.006851	0.00618	0.004975	-0.000056	2.12E-04
683	250000	14	150000	6	20000	0.007561	0.004767	0.004121	0.00359	0.002723	-5.04E-05	1.66E-04
684	250000	14	150000	6	50000	0.005184	0.00252	0.002015	0.00166	0.001145	-4.42E-05	1.10E-04
685	250000	14	150000	8	5000	0.01373	0.01083	0.01006	0.00935	0.007981	-5.35E-05	2.24E-04
686	250000	14	150000	8	10000	0.009846	0.00703	0.006347	0.00576	0.004705	-4.95E-05	1.81E-04
687	250000	14	150000	8	20000	0.007199	0.004462	0.00387	0.0034	0.00262	-4.59E-05	1.41E-04
688	250000	14	150000	8	50000	0.005048	0.002413	0.001934	0.0016	0.001125	-4.2E-05	9.36E-05
689	250000	14	150000	10	5000	0.0127	0.009873	0.009173	0.00855	0.007361	-4.82E-05	1.93E-04
690	250000	14	150000	10	10000	0.009274	0.006515	0.005891	0.00537	0.004438	-4.55E-05	1.56E-04
691	250000	14	150000	10	20000	0.006889	0.004194	0.003643	0.00322	0.002515	-4.32E-05	1.22E-04
692	250000	14	150000	10	50000	0.004932	0.002319	0.00186	0.00155	0.001102	-4.08E-05	8.04E-05
693	250000	14	150000	12	5000	0.01178	0.009011	0.00837	0.00782	0.00677	-4.46E-05	1.68E-04
694	250000	14	150000	12	10000	0.008773	0.006058	0.005479	0.00501	0.004177	-4.29E-05	1.35E-04
695	250000	14	150000	12	20000	0.006621	0.003957	0.003438	0.00305	0.00241	-4.14E-05	1.06E-04
696	250000	14	150000	12	50000	0.004833	0.002236	0.001792	0.0015	0.001078	-4E-05	6.97E-05
697	250000	14	150000	14	5000	0.01096	0.008237	0.007641	0.00714	0.006213	-4.21E-05	1.47E-04
698	250000	14	150000	14	10000	0.008331	0.005648	0.005104	0.00467	0.003926	-4.11E-05	1.19E-04
699	250000	14	150000	14	20000	0.006386	0.003746	0.003253	0.00289	0.002307	-4.02E-05	9.25E-05
700	250000	14	150000	14	50000	0.004747	0.002162	0.001731	0.00145	0.001052	-3.95E-05	6.10E-05

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
701	500000	2	50000	6	5000	0.04263	0.02598	0.0188	0.01334	0.005675	-0.000273	2.25E-03
702	500000	2	50000	6	10000	0.02892	0.01494	0.01003	0.00677	0.002822	-0.000257	1.65E-03
703	500000	2	50000	6	20000	0.01981	0.008227	0.005065	0.00327	0.001374	-0.00024	1.13E-03
704	500000	2	50000	6	50000	0.01267	0.003573	0.001946	0.00123	0.0005398	-0.000221	5.99E-04
705	500000	2	50000	8	5000	0.03581	0.02186	0.01626	0.01186	0.005194	-0.000233	1.70E-03
706	500000	2	50000	8	10000	0.02559	0.01331	0.009253	0.00645	0.002747	-0.00023	1.26E-03
707	500000	2	50000	8	20000	0.01843	0.007701	0.0049	0.00325	0.001373	-0.000226	8.75E-04
708	500000	2	50000	8	50000	0.01267	0.003584	0.001958	0.00124	0.0005431	-0.00022	4.71E-04
709	500000	2	50000	10	5000	0.03076	0.01839	0.01386	0.01026	0.004577	-0.000214	1.31E-03
710	500000	2	50000	10	10000	0.02311	0.01185	0.0084	0.00598	0.002593	-0.000217	9.85E-04
711	500000	2	50000	10	20000	0.01741	0.007202	0.004675	0.00317	0.001352	-0.000219	6.89E-04
712	500000	2	50000	10	50000	0.01267	0.003589	0.001966	0.00124	0.000546	-0.00022	3.74E-04
713	500000	2	50000	12	5000	0.02694	0.01556	0.01177	0.00879	0.003964	-0.000206	1.03E-03
714	500000	2	50000	12	10000	0.0212	0.01058	0.007565	0.00546	0.002401	-0.000211	7.85E-04
715	500000	2	50000	12	20000	0.01662	0.006746	0.004425	0.00304	0.001313	-0.000216	5.52E-04
716	500000	2	50000	12	50000	0.01266	0.003592	0.001971	0.00125	0.0005483	-0.000219	3.01E-04
717	500000	2	50000	14	5000	0.02403	0.01329	0.01002	0.00752	0.003417	-0.000202	8.23E-04
718	500000	2	50000	14	10000	0.01969	0.009496	0.006796	0.00494	0.002199	-0.000209	6.35E-04
719	500000	2	50000	14	20000	0.016	0.006339	0.004171	0.0029	0.001264	-0.000214	4.50E-04
720	500000	2	50000	14	50000	0.01266	0.003592	0.001974	0.00125	0.0005501	-0.000219	2.46E-04
721	500000	2	75000	6	5000	0.03705	0.02395	0.0179	0.01299	0.005613	-0.000167	1.86E-03
722	500000	2	75000	6	10000	0.02518	0.01409	0.009859	0.00683	0.002861	-0.000163	1.41E-03
723	500000	2	75000	6	20000	0.01709	0.007873	0.005091	0.00336	0.001398	-0.000158	1.00E-03
724	500000	2	75000	6	50000	0.01061	0.00344	0.001993	0.00127	0.0005434	-0.000151	5.67E-04
725	500000	2	75000	8	5000	0.03013	0.01949	0.01494	0.01111	0.004942	-0.000137	1.38E-03
726	500000	2	75000	8	10000	0.02163	0.01221	0.008851	0.00633	0.002727	-0.000142	1.06E-03
727	500000	2	75000	8	20000	0.01542	0.007179	0.004827	0.00329	0.001389	-0.000145	7.64E-04
728	500000	2	75000	8	50000	0.01026	0.003345	0.001982	0.00128	0.0005468	-0.000147	4.40E-04
729	500000	2	75000	10	5000	0.02511	0.01586	0.01229	0.00926	0.004189	-0.000125	1.05E-03
730	500000	2	75000	10	10000	0.01902	0.01057	0.007808	0.00569	0.002503	-0.000133	8.15E-04
731	500000	2	75000	10	20000	0.0142	0.006539	0.0045	0.00314	0.001346	-0.000139	5.95E-04
732	500000	2	75000	10	50000	0.01001	0.003245	0.001952	0.00128	0.0005472	-0.000145	3.46E-04
733	500000	2	75000	12	5000	0.02139	0.01301	0.01011	0.00767	0.003502	-0.000121	8.12E-04
734	500000	2	75000	12	10000	0.01702	0.009176	0.006834	0.00504	0.002249	-0.000129	6.43E-04
735	500000	2	75000	12	20000	0.01327	0.005965	0.004156	0.00295	0.001281	-0.000137	4.73E-04
736	500000	2	75000	12	50000	0.009818	0.003149	0.001911	0.00126	0.0005444	-0.000145	2.76E-04
737	500000	2	75000	14	5000	0.01863	0.0108	0.008369	0.00637	0.002927	-0.000121	6.42E-04
738	500000	2	75000	14	10000	0.01547	0.008011	0.005971	0.00444	0.002	-0.000129	5.16E-04
739	500000	2	75000	14	20000	0.01253	0.00546	0.00382	0.00274	0.001205	-0.000136	3.83E-04
740	500000	2	75000	14	50000	0.009665	0.003061	0.001864	0.00124	0.0005386	-0.000144	2.25E-04
741	500000	2	100000	6	5000	0.03349	0.0225	0.01715	0.01263	0.005518	-0.000104	1.61E-03
742	500000	2	100000	6	10000	0.02282	0.01348	0.009682	0.00682	0.002878	-0.000107	1.24E-03
743	500000	2	100000	6	20000	0.01543	0.007632	0.00509	0.00341	0.001417	-0.000109	9.03E-04
744	500000	2	100000	6	50000	0.009406	0.003368	0.002023	0.00129	0.0005479	-0.000109	5.33E-04
745	500000	2	100000	8	5000	0.02661	0.01787	0.01394	0.01049	0.004715	-8.17E-05	1.18E-03
746	500000	2	100000	8	10000	0.01921	0.01146	0.008516	0.00619	0.002692	-9.05E-05	9.19E-04
747	500000	2	100000	8	20000	0.01364	0.006838	0.004752	0.0033	0.001397	-9.77E-05	6.81E-04
748	500000	2	100000	8	50000	0.008896	0.003212	0.001992	0.0013	0.0005515	-0.000105	4.10E-04
749	500000	2	100000	10	5000	0.02168	0.0142	0.01119	0.00852	0.003886	-7.5E-05	8.84E-04
750	500000	2	100000	10	10000	0.01657	0.00972	0.007354	0.00544	0.002417	-8.49E-05	7.03E-04

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
751	500000	2	100000	10	20000	0.01234	0.006117	0.004355	0.0031	0.001337	-9.38E-05	5.26E-04
752	500000	2	100000	10	50000	0.008523	0.003055	0.001936	0.00129	0.0005496	-0.000103	3.20E-04
753	500000	2	100000	12	5000	0.01811	0.0114	0.008996	0.00689	0.003169	-7.46E-05	6.80E-04
754	500000	2	100000	12	10000	0.01456	0.008269	0.006303	0.00471	0.002123	-8.39E-05	5.51E-04
755	500000	2	100000	12	20000	0.01134	0.005479	0.003951	0.00285	0.001251	-9.29E-05	4.16E-04
756	500000	2	100000	12	50000	0.00824	0.002906	0.001865	0.00126	0.0005423	-0.000103	2.55E-04
757	500000	2	100000	14	5000	0.0155	0.009286	0.007304	0.0056	0.002593	-7.67E-05	5.34E-04
758	500000	2	100000	14	10000	0.01302	0.007079	0.0054	0.00406	0.001847	-8.47E-05	4.40E-04
759	500000	2	100000	14	20000	0.01055	0.004924	0.003566	0.0026	0.001155	-9.31E-05	3.36E-04
760	500000	2	100000	14	50000	0.008017	0.002771	0.001788	0.00122	0.0005305	-0.000103	2.07E-04
761	500000	2	125000	6	5000	0.03096	0.02139	0.01652	0.01229	0.005415	-6.32E-05	1.44E-03
762	500000	2	125000	6	10000	0.02117	0.01301	0.009518	0.00679	0.002885	-7.03E-05	1.11E-03
763	500000	2	125000	6	20000	0.01428	0.007446	0.005078	0.00345	0.001432	-7.57E-05	8.26E-04
764	500000	2	125000	6	50000	0.008602	0.003318	0.002042	0.00132	0.0005523	-8.07E-05	5.03E-04
765	500000	2	125000	8	5000	0.02415	0.01666	0.01315	0.00998	0.004517	-4.67E-05	1.04E-03
766	500000	2	125000	8	10000	0.01754	0.01089	0.008231	0.00605	0.002653	-5.76E-05	8.20E-04
767	500000	2	125000	8	20000	0.01243	0.006583	0.004681	0.00329	0.001401	-6.7E-05	6.17E-04
768	500000	2	125000	8	50000	0.007995	0.00312	0.001996	0.00132	0.0005559	-7.68E-05	3.83E-04
769	500000	2	125000	10	5000	0.01933	0.013	0.01035	0.00794	0.003643	-4.38E-05	7.73E-04
770	500000	2	125000	10	10000	0.0149	0.009089	0.006987	0.00522	0.002338	-5.46E-05	6.24E-04
771	500000	2	125000	10	20000	0.01108	0.005808	0.004231	0.00305	0.001324	-6.48E-05	4.75E-04
772	500000	2	125000	10	50000	0.007555	0.002925	0.001919	0.0013	0.0005518	-7.57E-05	2.98E-04
773	500000	2	125000	12	5000	0.01589	0.01026	0.008182	0.0063	0.002916	-4.59E-05	5.90E-04
774	500000	2	125000	12	10000	0.0129	0.007609	0.00589	0.00445	0.002016	-5.54E-05	4.86E-04
775	500000	2	125000	12	20000	0.01006	0.005128	0.003783	0.00277	0.001222	-6.49E-05	3.75E-04
776	500000	2	125000	12	50000	0.007221	0.002744	0.001826	0.00126	0.0005404	-7.57E-05	2.37E-04
777	500000	2	125000	14	5000	0.01342	0.008236	0.006544	0.00505	0.002348	-4.97E-05	4.61E-04
778	500000	2	125000	14	10000	0.01138	0.006416	0.004968	0.00377	0.001725	-5.75E-05	3.86E-04
779	500000	2	125000	14	20000	0.00925	0.004543	0.003366	0.00248	0.001111	-6.6E-05	3.01E-04
780	500000	2	125000	14	50000	0.006958	0.002579	0.001728	0.0012	0.0005235	-7.61E-05	1.92E-04
781	500000	2	150000	6	5000	0.02905	0.02049	0.01599	0.01198	0.005314	-3.44E-05	1.30E-03
782	500000	2	150000	6	10000	0.01993	0.01263	0.009364	0.00674	0.002882	-4.41E-05	1.02E-03
783	500000	2	150000	6	20000	0.01342	0.007293	0.005059	0.00347	0.001443	-5.21E-05	7.64E-04
784	500000	2	150000	6	50000	0.008018	0.003278	0.002057	0.00133	0.0005563	-6.04E-05	4.76E-04
785	500000	2	150000	8	5000	0.02231	0.0157	0.0125	0.00955	0.004344	-2.29E-05	9.34E-04
786	500000	2	150000	8	10000	0.0163	0.01043	0.007984	0.00592	0.002612	-3.49E-05	7.46E-04
787	500000	2	150000	8	20000	0.01154	0.006378	0.004613	0.00328	0.001402	-4.56E-05	5.68E-04
788	500000	2	150000	8	50000	0.00735	0.003049	0.001996	0.00133	0.0005598	-5.73E-05	3.61E-04
789	500000	2	150000	10	5000	0.0176	0.01207	0.009685	0.00746	0.003442	-2.3E-05	6.92E-04
790	500000	2	150000	10	10000	0.01367	0.00859	0.006681	0.00503	0.002266	-3.41E-05	5.64E-04
791	500000	2	150000	10	20000	0.01018	0.005563	0.004121	0.003	0.001311	-4.48E-05	4.35E-04
792	500000	2	150000	10	50000	0.006868	0.002828	0.001902	0.0013	0.0005535	-5.68E-05	2.79E-04
793	500000	2	150000	12	5000	0.01428	0.009401	0.00755	0.00584	0.002714	-2.69E-05	5.25E-04
794	500000	2	150000	12	10000	0.01169	0.007097	0.005555	0.00422	0.001925	-3.62E-05	4.38E-04
795	500000	2	150000	12	20000	0.009134	0.004855	0.00364	0.00269	0.001194	-4.59E-05	3.42E-04
796	500000	2	150000	12	50000	0.006502	0.002623	0.001792	0.00125	0.00125	-5.73E-05	2.21E-04
797	500000	2	150000	14	5000	0.01192	0.007455	0.005967	0.00462	0.002157	-3.18E-05	4.07E-04
798	500000	2	150000	14	10000	0.01019	0.005908	0.004624	0.00353	0.001623	-3.92E-05	3.46E-04
799	500000	2	150000	14	20000	0.008314	0.004251	0.0032	0.00238	0.001072	-4.76E-05	2.74E-04
800	500000	2	150000	14	50000	0.006214	0.002438	0.001678	0.00119	0.0005171	-5.8E-05	1.79E-04

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
801	500000	4	50000	6	5000	0.03362	0.02515	0.02051	0.01662	0.01083	-0.000274	1.27E-03
802	500000	4	50000	6	10000	0.02219	0.01487	0.01137	0.00873	0.005265	-0.00025	9.46E-04
803	500000	4	50000	6	20000	0.01486	0.008599	0.006069	0.0044	0.002505	-0.000227	6.60E-04
804	500000	4	50000	6	50000	0.009239	0.004115	0.002529	0.0017	0.0009422	-0.000203	3.61E-04
805	500000	4	50000	8	5000	0.02999	0.02248	0.01862	0.01541	0.01049	-0.000246	1.03E-03
806	500000	4	50000	8	10000	0.02036	0.01366	0.01061	0.00833	0.005242	-0.000231	7.69E-04
807	500000	4	50000	8	20000	0.0141	0.008154	0.005835	0.00431	0.002527	-0.000217	5.39E-04
808	500000	4	50000	8	50000	0.009239	0.00412	0.002537	0.0017	0.0009467	-0.000202	2.95E-04
809	500000	4	50000	10	5000	0.02708	0.02022	0.01691	0.0142	0.01	-0.000228	8.39E-04
810	500000	4	50000	10	10000	0.01889	0.01261	0.009901	0.0079	0.005147	-0.00022	6.33E-04
811	500000	4	50000	10	20000	0.01349	0.007757	0.005599	0.00419	0.002528	-0.000211	4.45E-04
812	500000	4	50000	10	50000	0.009238	0.004123	0.002542	0.00171	0.000951	-0.000202	2.44E-04
813	500000	4	50000	12	5000	0.02472	0.0183	0.01538	0.01305	0.009415	-0.000217	6.96E-04
814	500000	4	50000	12	10000	0.0177	0.01171	0.009249	0.00747	0.005002	-0.000213	5.27E-04
815	500000	4	50000	12	20000	0.01299	0.007408	0.005373	0.00407	0.00251	-0.000208	3.72E-04
816	500000	4	50000	12	50000	0.009237	0.004125	0.002545	0.00171	0.0009548	-0.000202	2.05E-04
817	500000	4	50000	14	5000	0.02276	0.01665	0.01401	0.01197	0.008788	-0.00021	5.85E-04
818	500000	4	50000	14	10000	0.01672	0.01093	0.008656	0.00705	0.004823	-0.000208	4.44E-04
819	500000	4	50000	14	20000	0.01257	0.007102	0.00516	0.00394	0.002478	-0.000205	3.15E-04
820	500000	4	50000	14	50000	0.009235	0.004126	0.002548	0.00172	0.0009582	-0.000202	1.73E-04
821	500000	4	75000	6	5000	0.03063	0.02343	0.0195	0.01612	0.01084	-0.000215	1.11E-03
822	500000	4	75000	6	10000	0.02023	0.01395	0.01095	0.0086	0.005349	-0.000198	8.50E-04
823	500000	4	75000	6	20000	0.01349	0.008089	0.005904	0.00439	0.002561	-0.000182	6.16E-04
824	500000	4	75000	6	50000	0.008212	0.003817	0.002469	0.00171	0.0009625	-0.000164	3.58E-04
825	500000	4	75000	8	5000	0.02675	0.02054	0.0174	0.0147	0.01036	-0.000187	8.73E-04
826	500000	4	75000	8	10000	0.01816	0.01256	0.01006	0.0081	0.005287	-0.000179	6.75E-04
827	500000	4	75000	8	20000	0.0125	0.007504	0.005585	0.00426	0.002582	-0.000171	4.94E-04
828	500000	4	75000	8	50000	0.008009	0.00372	0.002432	0.00171	0.0009728	-0.000161	2.89E-04
829	500000	4	75000	10	5000	0.02374	0.01815	0.01554	0.01333	0.009707	-0.000172	7.02E-04
830	500000	4	75000	10	10000	0.01655	0.01139	0.009237	0.00758	0.005137	-0.000168	5.46E-04
831	500000	4	75000	10	20000	0.01173	0.006997	0.005274	0.00409	0.00257	-0.000164	4.01E-04
832	500000	4	75000	10	50000	0.007848	0.00363	0.002389	0.0017	0.0009798	-0.000159	2.36E-04
833	500000	4	75000	12	5000	0.02133	0.01615	0.0139	0.01205	0.008978	-0.000163	5.74E-04
834	500000	4	75000	12	10000	0.01527	0.01041	0.008503	0.00707	0.004929	-0.000162	4.49E-04
835	500000	4	75000	12	20000	0.01111	0.00656	0.004982	0.00392	0.002532	-0.00016	3.31E-04
836	500000	4	75000	12	50000	0.007717	0.003549	0.002345	0.00168	0.0009832	-0.000158	1.96E-04
837	500000	4	75000	14	5000	0.01934	0.01445	0.01246	0.01087	0.00823	-0.000158	4.78E-04
838	500000	4	75000	14	10000	0.01423	0.009569	0.007843	0.00658	0.004689	-0.000158	3.74E-04
839	500000	4	75000	14	20000	0.01061	0.006183	0.004712	0.00375	0.002476	-0.000158	2.77E-04
840	500000	4	75000	14	50000	0.007611	0.003477	0.0023	0.00166	0.000983	-0.000157	1.64E-04
841	500000	4	100000	6	5000	0.02853	0.02221	0.01875	0.01571	0.0108	-0.000173	9.89E-04
842	500000	4	100000	6	10000	0.01886	0.01331	0.01064	0.00849	0.005401	-0.000162	7.71E-04
843	500000	4	100000	6	20000	0.01255	0.00775	0.005791	0.00438	0.002602	-0.00015	5.73E-04
844	500000	4	100000	6	50000	0.00756	0.003648	0.002441	0.00173	0.0009777	-0.000137	3.48E-04
845	500000	4	100000	8	5000	0.02459	0.01922	0.01653	0.01416	0.0102	-0.000148	7.67E-04
846	500000	4	100000	8	10000	0.01669	0.01183	0.009662	0.00792	0.005301	-0.000144	6.04E-04
847	500000	4	100000	8	20000	0.01145	0.007087	0.005418	0.00421	0.002618	-0.000139	4.53E-04
848	500000	4	100000	8	50000	0.007244	0.003493	0.002377	0.00172	0.0009914	-0.000133	2.77E-04
849	500000	4	100000	10	5000	0.02157	0.01679	0.01459	0.01269	0.009436	-0.000135	6.10E-04
850	500000	4	100000	10	10000	0.01504	0.01061	0.008785	0.00734	0.005103	-0.000134	4.83E-04

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
851	500000	4	100000	10	20000	0.0106	0.006524	0.005063	0.00402	0.002593	-0.000133	3.64E-04
852	500000	4	100000	10	50000	0.006997	0.003353	0.002307	0.00169	0.0009989	-0.00013	2.24E-04
853	500000	4	100000	12	5000	0.01916	0.01476	0.01291	0.01133	0.008611	-0.000128	4.95E-04
854	500000	4	100000	12	10000	0.01373	0.009586	0.008007	0.00678	0.004849	-0.000129	3.93E-04
855	500000	4	100000	12	20000	0.009937	0.006045	0.004734	0.00382	0.002538	-0.000129	2.98E-04
856	500000	4	100000	12	50000	0.006801	0.003229	0.002236	0.00166	0.001	-0.000129	1.85E-04
857	500000	4	100000	14	5000	0.01719	0.01305	0.01143	0.0101	0.007788	-0.000124	4.09E-04
858	500000	4	100000	14	10000	0.01267	0.008721	0.007314	0.00625	0.004566	-0.000126	3.26E-04
859	500000	4	100000	14	20000	0.009398	0.005635	0.004434	0.00361	0.002463	-0.000127	2.48E-04
860	500000	4	100000	14	50000	0.006642	0.00312	0.002167	0.00162	0.0009966	-0.000128	1.54E-04
861	500000	4	125000	6	5000	0.02696	0.02128	0.01816	0.01536	0.01075	-0.000143	8.99E-04
862	500000	4	125000	6	10000	0.01784	0.01282	0.01039	0.00839	0.005433	-0.000135	7.09E-04
863	500000	4	125000	6	20000	0.01186	0.007496	0.005702	0.00437	0.002634	-0.000127	5.36E-04
864	500000	4	125000	6	50000	0.007093	0.003533	0.002423	0.00174	0.0009901	-0.000117	3.35E-04
865	500000	4	125000	8	5000	0.02301	0.01825	0.01586	0.01372	0.01005	-0.000121	6.90E-04
866	500000	4	125000	8	10000	0.01562	0.01128	0.009358	0.00776	0.005297	-0.000118	5.49E-04
867	500000	4	125000	8	20000	0.01069	0.006785	0.005291	0.00418	0.002642	-0.000116	4.19E-04
868	500000	4	125000	8	50000	0.006706	0.00334	0.002341	0.00172	0.001006	-0.000112	2.65E-04
869	500000	4	125000	10	5000	0.02001	0.0158	0.01388	0.01218	0.009195	-0.00011	5.44E-04
870	500000	4	125000	10	10000	0.01395	0.01004	0.008445	0.00714	0.005061	-0.00011	4.35E-04
871	500000	4	125000	10	20000	0.009808	0.006189	0.004906	0.00396	0.002605	-0.00011	3.34E-04
872	500000	4	125000	10	50000	0.006408	0.003169	0.002252	0.00168	0.001013	-0.00011	2.13E-04
873	500000	4	125000	12	5000	0.01762	0.01377	0.01217	0.01078	0.008301	-0.000104	4.39E-04
874	500000	4	125000	12	10000	0.01265	0.009002	0.00764	0.00655	0.004771	-0.000106	3.53E-04
875	500000	4	125000	12	20000	0.009118	0.005687	0.004554	0.00373	0.002535	-0.000107	2.72E-04
876	500000	4	125000	12	50000	0.006174	0.003019	0.002163	0.00164	0.001012	-0.000108	1.74E-04
877	500000	4	125000	14	5000	0.01568	0.01206	0.01068	0.00951	0.007427	-0.000101	3.61E-04
878	500000	4	125000	14	10000	0.01159	0.008126	0.006927	0.00599	0.004454	-0.000103	2.91E-04
879	500000	4	125000	14	20000	0.008563	0.005259	0.004236	0.00351	0.002445	-0.000105	2.25E-04
880	500000	4	125000	14	50000	0.005985	0.002888	0.002078	0.00159	0.001005	-0.000108	1.44E-04
881	500000	4	150000	6	5000	0.02573	0.02053	0.01768	0.01507	0.01068	-0.000119	8.29E-04
882	500000	4	150000	6	10000	0.01703	0.01242	0.01018	0.0083	0.005453	-0.000114	6.58E-04
883	500000	4	150000	6	20000	0.01131	0.007295	0.005627	0.00436	0.002659	-0.000108	5.04E-04
884	500000	4	150000	6	50000	0.006736	0.003447	0.002409	0.00175	0.001001	-0.000101	3.22E-04
885	500000	4	150000	8	5000	0.0218	0.01748	0.01533	0.01335	0.0099	-9.95E-05	6.31E-04
886	500000	4	150000	8	10000	0.0148	0.01086	0.009113	0.00763	0.005285	-9.87E-05	5.05E-04
887	500000	4	150000	8	20000	0.01011	0.006551	0.005188	0.00414	0.00266	-9.76E-05	3.90E-04
888	500000	4	150000	8	50000	0.006301	0.003228	0.002313	0.00172	0.001018	-9.6E-05	2.53E-04
889	500000	4	150000	10	5000	0.01882	0.01503	0.01332	0.01177	0.008981	-9.02E-05	4.95E-04
890	500000	4	150000	10	10000	0.01313	0.009601	0.008175	0.00698	0.005017	-9.16E-05	3.98E-04
891	500000	4	150000	10	20000	0.009207	0.005934	0.004781	0.0039	0.002611	-9.27E-05	3.09E-04
892	500000	4	150000	10	50000	0.00597	0.003035	0.00221	0.00168	0.001024	-9.37E-05	2.02E-04
893	500000	4	150000	12	5000	0.01646	0.013	0.01159	0.01033	0.008035	-8.57E-05	3.98E-04
894	500000	4	150000	12	10000	0.01183	0.008558	0.007352	0.00636	0.004697	-8.82E-05	3.21E-04
895	500000	4	150000	12	20000	0.008506	0.005418	0.004413	0.00366	0.002528	-9.03E-05	2.51E-04
896	500000	4	150000	12	50000	0.005711	0.002867	0.002109	0.00163	0.001021	-9.25E-05	1.64E-04
897	500000	4	150000	14	5000	0.01454	0.0113	0.01009	0.00904	0.007125	-8.36E-05	3.26E-04
898	500000	4	150000	14	10000	0.01078	0.007677	0.006625	0.00578	0.004354	-8.65E-05	2.65E-04
899	500000	4	150000	14	20000	0.007943	0.00498	0.004082	0.00342	0.002425	-8.91E-05	2.07E-04
900	500000	4	150000	14	50000	0.005503	0.002722	0.002013	0.00157	0.00101	-9.19E-05	1.36E-04

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
901	500000	6	50000	6	5000	0.0267	0.02179	0.01888	0.01621	0.01178	-0.000205	7.91E-04
902	500000	6	50000	6	10000	0.01751	0.01315	0.01085	0.00891	0.006	-0.000185	5.97E-04
903	500000	6	50000	6	20000	0.01166	0.007826	0.006059	0.00471	0.002944	-0.000167	4.24E-04
904	500000	6	50000	6	50000	0.007185	0.003932	0.002717	0.00194	0.001113	-0.000148	2.38E-04
905	500000	6	50000	8	5000	0.02455	0.02002	0.01747	0.01516	0.01131	-0.000188	6.70E-04
906	500000	6	50000	8	10000	0.01642	0.01231	0.01023	0.00849	0.005872	-0.000174	5.06E-04
907	500000	6	50000	8	20000	0.0112	0.0075	0.00584	0.00458	0.002927	-0.000162	3.58E-04
908	500000	6	50000	8	50000	0.007186	0.003935	0.002721	0.00194	0.001117	-0.000148	1.99E-04
909	500000	6	50000	10	5000	0.0227	0.01845	0.01617	0.01415	0.01079	-0.000176	5.70E-04
910	500000	6	50000	10	10000	0.01548	0.01156	0.009647	0.00807	0.005711	-0.000167	4.31E-04
911	500000	6	50000	10	20000	0.01081	0.007204	0.00563	0.00445	0.002896	-0.000158	3.05E-04
912	500000	6	50000	10	50000	0.007291	0.004039	0.002825	0.00204	0.001214	-0.000148	1.69E-04
913	500000	6	50000	12	5000	0.02111	0.01708	0.01501	0.01321	0.01024	-0.000168	4.89E-04
914	500000	6	50000	12	10000	0.01467	0.01089	0.009114	0.00768	0.005531	-0.000161	3.71E-04
915	500000	6	50000	12	20000	0.01047	0.006939	0.005432	0.00432	0.002854	-0.000155	2.63E-04
916	500000	6	50000	12	50000	0.007186	0.003938	0.002727	0.00195	0.001124	-0.000148	1.46E-04
917	500000	6	50000	14	5000	0.01975	0.01587	0.01396	0.01234	0.009702	-0.000162	4.23E-04
918	500000	6	50000	14	10000	0.01398	0.01031	0.008631	0.0073	0.005342	-0.000158	3.21E-04
919	500000	6	50000	14	20000	0.01018	0.006703	0.005249	0.00419	0.002806	-0.000153	2.28E-04
920	500000	6	50000	14	50000	0.007185	0.003938	0.002728	0.00195	0.001126	-0.000148	1.26E-04
921	500000	6	75000	6	5000	0.02496	0.02055	0.018	0.01563	0.01161	-0.000172	7.16E-04
922	500000	6	75000	6	10000	0.01639	0.01246	0.01042	0.00867	0.005985	-0.000157	5.54E-04
923	500000	6	75000	6	20000	0.01088	0.007404	0.005836	0.00462	0.002962	-0.000143	4.07E-04
924	500000	6	75000	6	50000	0.006602	0.003656	0.002596	0.0019	0.001127	-0.000127	2.42E-04
925	500000	6	75000	8	5000	0.02254	0.01855	0.01639	0.01442	0.01103	-0.000154	5.92E-04
926	500000	6	75000	8	10000	0.01509	0.01145	0.009669	0.00816	0.005814	-0.000145	4.60E-04
927	500000	6	75000	8	20000	0.01026	0.00696	0.005538	0.00444	0.002933	-0.000136	3.38E-04
928	500000	6	75000	8	50000	0.006472	0.003576	0.002552	0.00188	0.001131	-0.000125	2.01E-04
929	500000	6	75000	10	5000	0.02052	0.01684	0.01496	0.01328	0.0104	-0.000143	4.94E-04
930	500000	6	75000	10	10000	0.014	0.01058	0.008988	0.00767	0.005607	-0.000137	3.85E-04
931	500000	6	75000	10	20000	0.009738	0.006569	0.005257	0.00426	0.002885	-0.000131	2.84E-04
932	500000	6	75000	10	50000	0.006364	0.003503	0.002507	0.00186	0.001132	-0.000124	1.69E-04
933	500000	6	75000	12	5000	0.01884	0.01537	0.0137	0.01225	0.009771	-0.000135	4.17E-04
934	500000	6	75000	12	10000	0.0131	0.009823	0.00838	0.00721	0.005382	-0.000131	3.26E-04
935	500000	6	75000	12	20000	0.009301	0.006226	0.004999	0.00409	0.002823	-0.000127	2.41E-04
936	500000	6	75000	12	50000	0.006273	0.003438	0.002464	0.00184	0.00113	-0.000123	1.43E-04
937	500000	6	75000	14	5000	0.01742	0.01411	0.0126	0.01131	0.009154	-0.00013	3.56E-04
938	500000	6	75000	14	10000	0.01233	0.009173	0.00784	0.00678	0.00515	-0.000128	2.79E-04
939	500000	6	75000	14	20000	0.008932	0.005926	0.004765	0.00392	0.002753	-0.000125	2.07E-04
940	500000	6	75000	14	50000	0.006195	0.003379	0.002422	0.00181	0.001125	-0.000122	1.23E-04
941	500000	6	100000	6	5000	0.02365	0.01962	0.01732	0.01518	0.01146	-0.000148	6.55E-04
942	500000	6	100000	6	10000	0.01556	0.01194	0.01009	0.00849	0.005966	-0.000136	5.15E-04
943	500000	6	100000	6	20000	0.01033	0.007108	0.005682	0.00456	0.002976	-0.000125	3.87E-04
944	500000	6	100000	6	50000	0.006218	0.003489	0.002529	0.00189	0.001138	-0.000111	2.40E-04
945	500000	6	100000	8	5000	0.02109	0.0175	0.01561	0.01386	0.01079	-0.00013	5.33E-04
946	500000	6	100000	8	10000	0.01414	0.01084	0.009267	0.00792	0.005761	-0.000123	4.21E-04
947	500000	6	100000	8	20000	0.009605	0.006595	0.005334	0.00435	0.002937	-0.000116	3.17E-04
948	500000	6	100000	8	50000	0.006009	0.00336	0.002456	0.00185	0.001143	-0.000108	1.97E-04
949	500000	6	100000	10	5000	0.01902	0.01572	0.01411	0.01266	0.0101	-0.000119	4.39E-04
950	500000	6	100000	10	10000	0.01299	0.009905	0.008533	0.00738	0.00552	-0.000115	3.48E-04

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
951	500000	6	100000	10	20000	0.009016	0.006151	0.005013	0.00414	0.002875	-0.000111	2.64E-04
952	500000	6	100000	10	50000	0.005839	0.003244	0.002384	0.00182	0.001141	-0.000106	1.64E-04
953	500000	6	100000	12	5000	0.01731	0.01423	0.01282	0.01158	0.009409	-0.000112	3.67E-04
954	500000	6	100000	12	10000	0.01204	0.009115	0.007888	0.00688	0.005263	-0.00011	2.92E-04
955	500000	6	100000	12	20000	0.008531	0.005768	0.004723	0.00393	0.002798	-0.000108	2.22E-04
956	500000	6	100000	12	50000	0.005697	0.003142	0.002316	0.00178	0.001135	-0.000105	1.38E-04
957	500000	6	100000	14	5000	0.01589	0.01295	0.01169	0.01061	0.008744	-0.000108	3.11E-04
958	500000	6	100000	14	10000	0.01126	0.00844	0.007322	0.00643	0.005003	-0.000107	2.48E-04
959	500000	6	100000	14	20000	0.008126	0.005438	0.004462	0.00374	0.002712	-0.000106	1.89E-04
960	500000	6	100000	14	50000	0.005578	0.003052	0.002251	0.00174	0.001125	-0.000104	1.18E-04
961	500000	6	125000	6	5000	0.02262	0.01888	0.01678	0.0148	0.01132	-0.000129	6.07E-04
962	500000	6	125000	6	10000	0.0149	0.01152	0.009829	0.00834	0.005945	-0.000119	4.82E-04
963	500000	6	125000	6	20000	0.009893	0.006879	0.005562	0.0045	0.002987	-0.00011	3.68E-04
964	500000	6	125000	6	50000	0.005933	0.00337	0.002484	0.00188	0.001148	-9.88E-05	2.34E-04
965	500000	6	125000	8	5000	0.01999	0.0167	0.015	0.01342	0.01059	-0.000112	4.87E-04
966	500000	6	125000	8	10000	0.01342	0.01037	0.008955	0.00772	0.005711	-0.000106	3.89E-04
967	500000	6	125000	8	20000	0.00911	0.006321	0.005181	0.00427	0.002938	-0.000101	2.98E-04
968	500000	6	125000	8	50000	0.005672	0.003209	0.002392	0.00183	0.001152	-9.51E-05	1.91E-04
969	500000	6	125000	10	5000	0.0179	0.01489	0.01347	0.01217	0.009846	-0.000102	3.97E-04
970	500000	6	125000	10	10000	0.01223	0.009407	0.00819	0.00715	0.005442	-9.9E-05	3.19E-04
971	500000	6	125000	10	20000	0.008482	0.005845	0.004833	0.00404	0.002863	-9.63E-05	2.46E-04
972	500000	6	125000	10	50000	0.005462	0.003066	0.002302	0.00179	0.001148	-0.000093	1.57E-04
973	500000	6	125000	12	5000	0.0162	0.01339	0.01216	0.01107	0.009116	-9.56E-05	3.30E-04
974	500000	6	125000	12	10000	0.01127	0.0086	0.007526	0.00663	0.005162	-9.46E-05	2.65E-04
975	500000	6	125000	12	20000	0.00797	0.00544	0.004522	0.00382	0.002774	-9.33E-05	2.05E-04
976	500000	6	125000	12	50000	0.005289	0.002941	0.002217	0.00174	0.001139	-9.17E-05	1.32E-04
977	500000	6	125000	14	5000	0.01478	0.01211	0.01102	0.01009	0.008418	-9.19E-05	2.78E-04
978	500000	6	125000	14	10000	0.01048	0.007916	0.006948	0.00616	0.004882	-9.18E-05	2.24E-04
979	500000	6	125000	14	20000	0.007548	0.005093	0.004246	0.00361	0.002678	-9.14E-05	1.74E-04
980	500000	6	125000	14	50000	0.005145	0.002832	0.002138	0.00169	0.001125	-9.09E-05	1.12E-04
981	500000	6	150000	6	5000	0.02178	0.01827	0.01633	0.01449	0.01119	-0.000113	5.67E-04
982	500000	6	150000	6	10000	0.01436	0.01119	0.00961	0.00821	0.005922	-0.000105	4.54E-04
983	500000	6	150000	6	20000	0.00954	0.006694	0.005464	0.00446	0.002994	-9.77E-05	3.50E-04
984	500000	6	150000	6	50000	0.005709	0.00328	0.00245	0.00187	0.001157	-8.85E-05	2.28E-04
985	500000	6	150000	8	5000	0.01912	0.01606	0.01451	0.01305	0.01042	-9.69E-05	4.50E-04
986	500000	6	150000	8	10000	0.01284	0.009998	0.008703	0.00756	0.005664	-9.31E-05	3.63E-04
987	500000	6	150000	8	20000	0.008718	0.006105	0.005057	0.00421	0.002936	-8.93E-05	2.82E-04
988	500000	6	150000	8	50000	0.005411	0.003094	0.002343	0.00182	0.00116	-8.46E-05	1.84E-04
989	500000	6	150000	10	5000	0.01703	0.01425	0.01297	0.01179	0.009632	-8.79E-05	3.65E-04
990	500000	6	150000	10	10000	0.01164	0.009018	0.007919	0.00697	0.005374	-8.63E-05	2.95E-04
991	500000	6	150000	10	20000	0.008066	0.005608	0.004691	0.00396	0.002851	-8.46E-05	2.30E-04
992	500000	6	150000	10	50000	0.005173	0.002933	0.00224	0.00177	0.001154	-8.24E-05	1.51E-04
993	500000	6	150000	12	5000	0.01534	0.01275	0.01165	0.01067	0.008872	-8.27E-05	3.02E-04
994	500000	6	150000	12	10000	0.01068	0.008203	0.007244	0.00644	0.005075	-8.23E-05	2.44E-04
995	500000	6	150000	12	20000	0.007539	0.005189	0.004368	0.00373	0.002752	-8.18E-05	1.91E-04
996	500000	6	150000	12	50000	0.004979	0.002792	0.002144	0.00171	0.001141	-8.11E-05	1.26E-04
997	500000	6	150000	14	5000	0.01393	0.01147	0.01051	0.00967	0.00815	-7.95E-05	2.53E-04
998	500000	6	150000	14	10000	0.009885	0.007517	0.006659	0.00596	0.00478	-7.99E-05	2.05E-04
999	500000	6	150000	14	20000	0.007108	0.004833	0.004082	0.00351	0.002646	-8.01E-05	1.61E-04
1000	500000	6	150000	14	50000	0.004819	0.00267	0.002055	0.00165	0.001124	-8.03E-05	1.06E-04

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
1001	500000	8	50000	6	5000	0.0214	0.0181	0.01621	0.01438	0.0111	-0.000151	5.34E-04
1002	500000	8	50000	6	10000	0.01413	0.01114	0.009586	0.00818	0.00589	-0.000136	4.08E-04
1003	500000	8	50000	6	20000	0.009473	0.00677	0.005534	0.00451	0.002998	-0.000123	2.94E-04
1004	500000	8	50000	6	50000	0.005887	0.003513	0.002615	0.00196	0.001169	-0.000108	1.69E-04
1005	500000	8	50000	8	5000	0.02005	0.01693	0.0152	0.01356	0.01063	-0.00014	4.68E-04
1006	500000	8	50000	8	10000	0.01343	0.01055	0.009115	0.00783	0.005725	-0.000129	3.56E-04
1007	500000	8	50000	8	20000	0.009173	0.006534	0.005355	0.00438	0.002957	-0.000119	2.54E-04
1008	500000	8	50000	8	50000	0.005888	0.003515	0.002618	0.00197	0.001173	-0.000108	1.44E-04
1009	500000	8	50000	10	5000	0.0188	0.01582	0.01424	0.01276	0.01013	-0.000133	4.10E-04
1010	500000	8	50000	10	10000	0.01279	0.01001	0.008665	0.00748	0.005543	-0.000124	3.11E-04
1011	500000	8	50000	10	20000	0.008904	0.006315	0.005184	0.00426	0.002908	-0.000116	2.22E-04
1012	500000	8	50000	10	50000	0.005888	0.003516	0.00262	0.00197	0.001175	-0.000108	1.24E-04
1013	500000	8	50000	12	5000	0.01768	0.01481	0.01335	0.01199	0.009614	-0.000127	3.61E-04
1014	500000	8	50000	12	10000	0.01223	0.009518	0.008246	0.00714	0.005353	-0.000121	2.73E-04
1015	500000	8	50000	12	20000	0.008666	0.006116	0.005023	0.00414	0.002854	-0.000114	1.95E-04
1016	500000	8	50000	12	50000	0.005888	0.003517	0.002621	0.00197	0.001178	-0.000108	1.09E-04
1017	500000	8	50000	14	5000	0.01667	0.01389	0.01251	0.01127	0.009106	-0.000123	3.19E-04
1018	500000	8	50000	14	10000	0.01172	0.00907	0.007858	0.00682	0.005161	-0.000118	2.42E-04
1019	500000	8	50000	14	20000	0.008454	0.005934	0.004873	0.00402	0.002797	-0.000113	1.72E-04
1020	500000	8	50000	14	50000	0.005888	0.003518	0.002622	0.00197	0.00118	-0.000108	9.58E-05
1021	500000	8	75000	6	5000	0.02032	0.01725	0.01554	0.01388	0.01087	-0.000132	4.95E-04
1022	500000	8	75000	6	10000	0.01343	0.01063	0.009225	0.00795	0.005818	-0.00012	3.87E-04
1023	500000	8	75000	6	20000	0.008988	0.006451	0.005328	0.00439	0.00298	-0.000108	2.88E-04
1024	500000	8	75000	6	50000	0.005517	0.003291	0.002486	0.0019	0.001166	-9.53E-05	1.75E-04
1025	500000	8	75000	8	5000	0.01872	0.01586	0.01435	0.01291	0.01029	-0.00012	4.24E-04
1026	500000	8	75000	8	10000	0.01256	0.009912	0.008644	0.00751	0.00561	-0.000111	3.31E-04
1027	500000	8	75000	8	20000	0.008566	0.006121	0.00508	0.00422	0.002922	-0.000103	2.45E-04
1028	500000	8	75000	8	50000	0.005427	0.003228	0.002445	0.00188	0.001164	-9.39E-05	1.48E-04
1029	500000	8	75000	10	5000	0.0173	0.0146	0.01325	0.01198	0.009695	-0.000112	3.65E-04
1030	500000	8	75000	10	10000	0.0118	0.009264	0.008105	0.00708	0.005384	-0.000105	2.85E-04
1031	500000	8	75000	10	20000	0.0082	0.005824	0.004847	0.00405	0.002853	-9.96E-05	2.11E-04
1032	500000	8	75000	10	50000	0.005351	0.003171	0.002405	0.00185	0.00116	-9.29E-05	1.26E-04
1033	500000	8	75000	12	5000	0.01606	0.01347	0.01224	0.01111	0.009098	-0.000106	3.16E-04
1034	500000	8	75000	12	10000	0.01114	0.008687	0.007613	0.00668	0.005152	-0.000101	2.47E-04
1035	500000	8	75000	12	20000	0.007881	0.005558	0.004632	0.00389	0.002778	-9.71E-05	1.83E-04
1036	500000	8	75000	12	50000	0.005284	0.003119	0.002366	0.00183	0.001153	-9.23E-05	1.09E-04
1037	500000	8	75000	14	5000	0.01496	0.01246	0.01133	0.01031	0.008515	-0.000102	2.76E-04
1038	500000	8	75000	14	10000	0.01056	0.008174	0.007166	0.00631	0.004919	-9.84E-05	2.16E-04
1039	500000	8	75000	14	20000	0.007604	0.00532	0.004435	0.00373	0.002699	-9.53E-05	1.60E-04
1040	500000	8	75000	14	50000	0.005226	0.003072	0.00233	0.0018	0.001145	-9.18E-05	9.54E-05
1041	500000	8	100000	6	5000	0.01945	0.01657	0.015	0.01347	0.01067	-0.000116	4.62E-04
1042	500000	8	100000	6	10000	0.01289	0.01024	0.008945	0.00776	0.005759	-0.000106	3.66E-04
1043	500000	8	100000	6	20000	0.008627	0.006219	0.005181	0.0043	0.00297	-9.65E-05	2.78E-04
1044	500000	8	100000	6	50000	0.005268	0.003151	0.002411	0.00187	0.001169	-8.53E-05	1.75E-04
1045	500000	8	100000	8	5000	0.01772	0.01505	0.0137	0.0124	0.01002	-0.000104	3.89E-04
1046	500000	8	100000	8	10000	0.01192	0.009438	0.008295	0.00726	0.005518	-9.73E-05	3.08E-04
1047	500000	8	100000	8	20000	0.008129	0.005831	0.004888	0.0041	0.002899	-9.07E-05	2.34E-04
1048	500000	8	100000	8	50000	0.005122	0.003048	0.002342	0.00183	0.001164	-8.31E-05	1.46E-04
1049	500000	8	100000	10	5000	0.01621	0.01371	0.01252	0.0114	0.009357	-9.59E-05	3.30E-04
1050	500000	8	100000	10	10000	0.01109	0.00873	0.007703	0.0068	0.005261	-9.14E-05	2.62E-04

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
1051	500000	8	100000	10	20000	0.007705	0.005486	0.004618	0.00391	0.002816	-8.69E-05	1.99E-04
1052	500000	8	100000	10	50000	0.004998	0.002956	0.002277	0.00179	0.001155	-8.17E-05	1.24E-04
1053	500000	8	100000	12	5000	0.01491	0.01253	0.01146	0.01048	0.008704	-9.04E-05	2.83E-04
1054	500000	8	100000	12	10000	0.01038	0.00811	0.007172	0.00636	0.005	-8.73E-05	2.25E-04
1055	500000	8	100000	12	20000	0.007343	0.005183	0.004372	0.00372	0.002726	-8.43E-05	1.71E-04
1056	500000	8	100000	12	50000	0.004893	0.002873	0.002216	0.00175	0.001143	-8.07E-05	1.07E-04
1057	500000	8	100000	14	5000	0.01377	0.01148	0.01051	0.00964	0.008074	-8.65E-05	2.45E-04
1058	500000	8	100000	14	10000	0.009769	0.007565	0.006696	0.00596	0.004742	-8.45E-05	1.95E-04
1059	500000	8	100000	14	20000	0.007032	0.004917	0.00415	0.00354	0.002633	-8.25E-05	1.48E-04
1060	500000	8	100000	14	50000	0.004802	0.0028	0.002159	0.00171	0.001128	-8.01E-05	9.25E-05
1061	500000	8	125000	6	5000	0.01875	0.01601	0.01456	0.01313	0.0105	-0.000104	4.33E-04
1062	500000	8	125000	6	10000	0.01244	0.009922	0.008714	0.0076	0.005707	-9.53E-05	3.46E-04
1063	500000	8	125000	6	20000	0.008338	0.006034	0.005064	0.00424	0.002961	-8.7E-05	2.67E-04
1064	500000	8	125000	6	50000	0.00508	0.003049	0.002357	0.00184	0.001172	-7.72E-05	1.72E-04
1065	500000	8	125000	8	5000	0.01692	0.01441	0.01318	0.012	0.00979	-9.16E-05	3.61E-04
1066	500000	8	125000	8	10000	0.01141	0.009064	0.008018	0.00707	0.00544	-8.61E-05	2.88E-04
1067	500000	8	125000	8	20000	0.007789	0.005606	0.004741	0.00401	0.00288	-8.08E-05	2.22E-04
1068	500000	8	125000	8	50000	0.004894	0.002919	0.002271	0.00179	0.001165	-7.45E-05	1.43E-04
1069	500000	8	125000	10	5000	0.01537	0.01302	0.01195	0.01095	0.009079	-8.38E-05	3.03E-04
1070	500000	8	125000	10	10000	0.01054	0.00832	0.007393	0.00657	0.005159	-8.03E-05	2.43E-04
1071	500000	8	125000	10	20000	0.007328	0.005232	0.004446	0.0038	0.002786	-7.69E-05	1.87E-04
1072	500000	8	125000	10	50000	0.004739	0.002803	0.002189	0.00174	0.001152	-7.28E-05	1.21E-04
1073	500000	8	125000	12	5000	0.01404	0.01181	0.01086	0.00999	0.008387	-7.86E-05	2.58E-04
1074	500000	8	125000	12	10000	0.009806	0.007676	0.006839	0.00611	0.004877	-7.65E-05	2.07E-04
1075	500000	8	125000	12	20000	0.00694	0.004907	0.004181	0.0036	0.002685	-7.43E-05	1.60E-04
1076	500000	8	125000	12	50000	0.004609	0.002701	0.002113	0.00169	0.001136	-7.17E-05	1.03E-04
1077	500000	8	125000	14	5000	0.01289	0.01075	0.00989	0.00912	0.007725	-7.51E-05	2.22E-04
1078	500000	8	125000	14	10000	0.009179	0.007115	0.006346	0.0057	0.0046	-7.39E-05	1.78E-04
1079	500000	8	125000	14	20000	0.00661	0.004623	0.003943	0.00341	0.002581	-7.26E-05	1.38E-04
1080	500000	8	125000	14	50000	0.004497	0.00261	0.002043	0.00164	0.001117	-7.1E-05	8.90E-05
1081	500000	8	150000	6	5000	0.01816	0.01554	0.01418	0.01284	0.01034	-9.35E-05	4.09E-04
1082	500000	8	150000	6	10000	0.01207	0.009654	0.008519	0.00747	0.005659	-8.61E-05	3.29E-04
1083	500000	8	150000	6	20000	0.008097	0.005881	0.004966	0.00418	0.002953	-7.89E-05	2.56E-04
1084	500000	8	150000	6	50000	0.004929	0.002969	0.002317	0.00183	0.001175	-7.04E-05	1.69E-04
1085	500000	8	150000	8	5000	0.01627	0.01389	0.01275	0.01166	0.009591	-8.15E-05	3.37E-04
1086	500000	8	150000	8	10000	0.01099	0.008758	0.007789	0.00691	0.005371	-7.7E-05	2.72E-04
1087	500000	8	150000	8	20000	0.007512	0.005424	0.00462	0.00394	0.002863	-7.26E-05	2.12E-04
1088	500000	8	150000	8	50000	0.004715	0.002819	0.002217	0.00177	0.001166	-6.74E-05	1.40E-04
1089	500000	8	150000	10	5000	0.01469	0.01247	0.0115	0.01057	0.008843	-7.4E-05	2.82E-04
1090	500000	8	150000	10	10000	0.0101	0.007992	0.007144	0.00639	0.005071	-7.14E-05	2.27E-04
1091	500000	8	150000	10	20000	0.007028	0.00503	0.004309	0.00371	0.002759	-6.87E-05	1.77E-04
1092	500000	8	150000	10	50000	0.004537	0.002686	0.002122	0.00171	0.001151	-6.56E-05	1.17E-04
1093	500000	8	150000	12	5000	0.01335	0.01125	0.01039	0.0096	0.008122	-6.93E-05	2.38E-04
1094	500000	8	150000	12	10000	0.009353	0.007334	0.006576	0.00592	0.004773	-6.78E-05	1.92E-04
1095	500000	8	150000	12	20000	0.006623	0.004691	0.004031	0.0035	0.00265	-6.63E-05	1.50E-04
1096	500000	8	150000	12	50000	0.004389	0.00257	0.002036	0.00165	0.001131	-6.44E-05	9.94E-05
1097	500000	8	150000	14	5000	0.01219	0.01017	0.009403	0.00871	0.007438	-6.61E-05	2.04E-04
1098	500000	8	150000	14	10000	0.008718	0.006764	0.006073	0.00549	0.004482	-6.54E-05	1.65E-04
1099	500000	8	150000	14	20000	0.006281	0.004396	0.003784	0.0033	0.002538	-6.46E-05	1.29E-04
1100	500000	8	150000	14	50000	0.004263	0.002468	0.001956	0.0016	0.001109	-6.36E-05	8.54E-05

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
1101	500000	10	50000	6	5000	0.01775	0.01526	0.01396	0.01266	0.01022	-0.000113	3.84E-04
1102	500000	10	50000	6	10000	0.01183	0.009525	0.008433	0.00741	0.005621	-0.000102	2.96E-04
1103	500000	10	50000	6	20000	0.00801	0.005883	0.004987	0.0042	0.002963	-9.17E-05	2.17E-04
1104	500000	10	50000	6	50000	0.005046	0.003122	0.002445	0.00192	0.001205	-8.05E-05	1.27E-04
1105	500000	10	50000	8	5000	0.01683	0.01444	0.01323	0.01204	0.009799	-0.000106	3.44E-04
1106	500000	10	50000	8	10000	0.01135	0.009108	0.008078	0.00712	0.005455	-9.74E-05	2.63E-04
1107	500000	10	50000	8	20000	0.0078	0.005708	0.004846	0.0041	0.002913	-8.92E-05	1.90E-04
1108	500000	10	50000	8	50000	0.005047	0.003124	0.002447	0.00192	0.001208	-8.04E-05	1.09E-04
1109	500000	10	50000	10	5000	0.01596	0.01364	0.0125	0.0114	0.009353	-0.000101	3.08E-04
1110	500000	10	50000	10	10000	0.0109	0.00871	0.007732	0.00683	0.00528	-9.4E-05	2.34E-04
1111	500000	10	50000	10	20000	0.007608	0.005544	0.004709	0.00399	0.002859	-8.74E-05	1.68E-04
1112	500000	10	50000	10	50000	0.005047	0.003125	0.002448	0.00192	0.00121	-8.03E-05	9.57E-05
1113	500000	10	50000	12	5000	0.01513	0.01287	0.01181	0.01078	0.008896	-9.72E-05	2.76E-04
1114	500000	10	50000	12	10000	0.01048	0.008337	0.007403	0.00655	0.0051	-9.13E-05	2.10E-04
1115	500000	10	50000	12	20000	0.007433	0.005391	0.004579	0.00389	0.002802	-8.6E-05	1.50E-04
1116	500000	10	50000	12	50000	0.005048	0.003125	0.002449	0.00192	0.001212	-8.03E-05	8.46E-05
1117	500000	10	50000	14	5000	0.01436	0.01215	0.01114	0.01018	0.008439	-9.39E-05	2.49E-04
1118	500000	10	50000	14	10000	0.0101	0.00799	0.007093	0.00629	0.004918	-8.92E-05	1.88E-04
1119	500000	10	50000	14	20000	0.007274	0.00525	0.004457	0.00379	0.002743	-8.49E-05	1.34E-04
1120	500000	10	50000	14	50000	0.005048	0.003126	0.00245	0.00192	0.001214	-8.02E-05	7.54E-05
1121	500000	10	75000	6	5000	0.01702	0.01465	0.01345	0.01225	0.009983	-0.000101	3.62E-04
1122	500000	10	75000	6	10000	0.01136	0.009158	0.008147	0.0072	0.005527	-9.13E-05	2.85E-04
1123	500000	10	75000	6	20000	0.007683	0.005643	0.004814	0.00409	0.002925	-8.23E-05	2.14E-04
1124	500000	10	75000	6	50000	0.004791	0.002947	0.002328	0.00185	0.001189	-7.2E-05	1.32E-04
1125	500000	10	75000	8	5000	0.01591	0.01365	0.01256	0.01149	0.009464	-9.3E-05	3.18E-04
1126	500000	10	75000	8	10000	0.01075	0.008631	0.0077	0.00684	0.005319	-8.56E-05	2.49E-04
1127	500000	10	75000	8	20000	0.007383	0.005394	0.004614	0.00394	0.002856	-7.87E-05	1.86E-04
1128	500000	10	75000	8	50000	0.004727	0.002898	0.002292	0.00182	0.001183	-0.000071	1.13E-04
1129	500000	10	75000	10	5000	0.01487	0.0127	0.0117	0.01074	0.008925	-8.71E-05	2.80E-04
1130	500000	10	75000	10	10000	0.0102	0.008141	0.007275	0.00648	0.005101	-8.15E-05	2.18E-04
1131	500000	10	75000	10	20000	0.007114	0.005165	0.004424	0.00379	0.00278	-7.62E-05	1.63E-04
1132	500000	10	75000	10	50000	0.00467	0.002852	0.002257	0.0018	0.001175	-7.03E-05	9.83E-05
1133	500000	10	75000	12	5000	0.01392	0.01182	0.01089	0.01001	0.008383	-8.27E-05	2.48E-04
1134	500000	10	75000	12	10000	0.0097	0.007692	0.006878	0.00615	0.004879	-7.84E-05	1.93E-04
1135	500000	10	75000	12	20000	0.006874	0.004957	0.004247	0.00365	0.002701	-7.44E-05	1.43E-04
1136	500000	10	75000	12	50000	0.004619	0.002811	0.002224	0.00178	0.001165	-6.98E-05	8.61E-05
1137	500000	10	75000	14	5000	0.01305	0.011	0.01014	0.00933	0.007851	-7.94E-05	2.20E-04
1138	500000	10	75000	14	10000	0.00925	0.007282	0.00651	0.00583	0.004658	-7.61E-05	1.71E-04
1139	500000	10	75000	14	20000	0.00666	0.004767	0.004084	0.00351	0.002621	-7.3E-05	1.27E-04
1140	500000	10	75000	14	50000	0.004574	0.002773	0.002193	0.00175	0.001155	-6.94E-05	7.62E-05
1141	500000	10	100000	6	5000	0.01642	0.01415	0.01303	0.01191	0.00978	-9.09E-05	3.42E-04
1142	500000	10	100000	6	10000	0.01098	0.008864	0.007919	0.00703	0.005451	-8.25E-05	2.72E-04
1143	500000	10	100000	6	20000	0.007434	0.005463	0.004686	0.004	0.0029	-7.46E-05	2.08E-04
1144	500000	10	100000	6	50000	0.004619	0.002834	0.002256	0.00181	0.001182	-6.53E-05	1.33E-04
1145	500000	10	100000	8	5000	0.01518	0.01303	0.01203	0.01105	0.009189	-8.23E-05	2.96E-04
1146	500000	10	100000	8	10000	0.01029	0.008265	0.007411	0.00662	0.005212	-7.62E-05	2.35E-04
1147	500000	10	100000	8	20000	0.007074	0.005166	0.004448	0.00383	0.002816	-7.04E-05	1.79E-04
1148	500000	10	100000	8	50000	0.004511	0.002752	0.002196	0.00177	0.001171	-6.37E-05	1.13E-04
1149	500000	10	100000	10	5000	0.01404	0.01199	0.01109	0.01022	0.008585	-7.63E-05	2.57E-04
1150	500000	10	100000	10	10000	0.009676	0.007719	0.006936	0.00622	0.004963	-7.18E-05	2.04E-04

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
1151	500000	10	100000	10	20000	0.006758	0.004897	0.004225	0.00365	0.002726	-6.75E-05	1.55E-04
1152	500000	10	100000	10	50000	0.004418	0.002678	0.00214	0.00173	0.001157	-6.26E-05	9.76E-05
1153	500000	10	100000	12	5000	0.01302	0.01104	0.01022	0.00944	0.007986	-7.19E-05	2.25E-04
1154	500000	10	100000	12	10000	0.009128	0.007225	0.006499	0.00585	0.004713	-6.86E-05	1.78E-04
1155	500000	10	100000	12	20000	0.00648	0.004655	0.00402	0.00349	0.002633	-6.55E-05	1.35E-04
1156	500000	10	100000	12	50000	0.004337	0.002611	0.002087	0.00169	0.001142	-6.19E-05	8.50E-05
1157	500000	10	100000	14	5000	0.0121	0.01017	0.009411	0.00871	0.007407	-6.87E-05	1.98E-04
1158	500000	10	100000	14	10000	0.008641	0.00678	0.006098	0.0055	0.004467	-6.63E-05	1.57E-04
1159	500000	10	100000	14	20000	0.006234	0.004438	0.003832	0.00333	0.00254	-6.4E-05	1.19E-04
1160	500000	10	100000	14	50000	0.004265	0.002551	0.002037	0.00165	0.001125	-6.13E-05	7.47E-05
1161	500000	10	125000	6	5000	0.01591	0.01372	0.01267	0.01162	0.009602	-8.25E-05	3.24E-04
1162	500000	10	125000	6	10000	0.01067	0.008618	0.007728	0.00689	0.005386	-7.51E-05	2.60E-04
1163	500000	10	125000	6	20000	0.00723	0.005317	0.004583	0.00394	0.002879	-6.81E-05	2.01E-04
1164	500000	10	125000	6	50000	0.004487	0.002751	0.002205	0.00178	0.001179	-5.98E-05	1.32E-04
1165	500000	10	125000	8	5000	0.01458	0.01252	0.0116	0.01069	0.008954	-7.36E-05	2.77E-04
1166	500000	10	125000	8	10000	0.00992	0.007968	0.007175	0.00644	0.005121	-6.85E-05	2.22E-04
1167	500000	10	125000	8	20000	0.006828	0.004986	0.004317	0.00374	0.002785	-6.35E-05	1.72E-04
1168	500000	10	125000	8	50000	0.004349	0.002646	0.002128	0.00173	0.001165	-5.78E-05	1.12E-04
1169	500000	10	125000	10	5000	0.01338	0.01142	0.0106	0.00981	0.008301	-6.76E-05	2.39E-04
1170	500000	10	125000	10	10000	0.009262	0.007385	0.006667	0.00601	0.004849	-6.4E-05	1.91E-04
1171	500000	10	125000	10	20000	0.00648	0.00469	0.004072	0.00354	0.002684	-6.05E-05	1.47E-04
1172	500000	10	125000	10	50000	0.004231	0.002552	0.002056	0.00168	0.001147	-5.64E-05	9.57E-05
1173	500000	10	125000	12	5000	0.01232	0.01043	0.009685	0.00899	0.007663	-6.34E-05	2.07E-04
1174	500000	10	125000	12	10000	0.008685	0.006864	0.006205	0.00562	0.004578	-6.08E-05	1.66E-04
1175	500000	10	125000	12	20000	0.006177	0.004427	0.003848	0.00336	0.002581	-5.84E-05	1.28E-04
1176	500000	10	125000	12	50000	0.004129	0.002468	0.00199	0.00163	0.001126	-5.55E-05	8.29E-05
1177	500000	10	125000	14	5000	0.01137	0.009534	0.008851	0.00822	0.007052	-6.03E-05	1.81E-04
1178	500000	10	125000	14	10000	0.008176	0.006399	0.005784	0.00525	0.004314	-5.86E-05	1.45E-04
1179	500000	10	125000	14	20000	0.005913	0.004193	0.003646	0.0032	0.002477	-5.69E-05	1.12E-04
1180	500000	10	125000	14	50000	0.00404	0.002393	0.001929	0.00158	0.001105	-5.49E-05	7.24E-05
1181	500000	10	150000	6	5000	0.01548	0.01335	0.01236	0.01136	0.009443	-7.53E-05	3.08E-04
1182	500000	10	150000	6	10000	0.0104	0.008407	0.007563	0.00677	0.005327	-6.88E-05	2.49E-04
1183	500000	10	150000	6	20000	0.007057	0.005194	0.004496	0.00388	0.002862	-6.25E-05	1.95E-04
1184	500000	10	150000	6	50000	0.00438	0.002684	0.002164	0.00176	0.001177	-5.51E-05	1.30E-04
1185	500000	10	150000	8	5000	0.01408	0.01209	0.01123	0.01038	0.008749	-6.64E-05	2.61E-04
1186	500000	10	150000	8	10000	0.009608	0.00772	0.006978	0.00629	0.005042	-6.2E-05	2.11E-04
1187	500000	10	150000	8	20000	0.006624	0.004837	0.004209	0.00366	0.002759	-5.77E-05	1.65E-04
1188	500000	10	150000	8	50000	0.004219	0.002562	0.002075	0.0017	0.00116	-5.28E-05	1.10E-04
1189	500000	10	150000	10	5000	0.01284	0.01095	0.01019	0.00946	0.00806	-6.05E-05	2.23E-04
1190	500000	10	150000	10	10000	0.008922	0.007112	0.006446	0.00584	0.004751	-5.75E-05	1.80E-04
1191	500000	10	150000	10	20000	0.006254	0.004522	0.003948	0.00346	0.002649	-5.47E-05	1.41E-04
1192	500000	10	150000	10	50000	0.004083	0.002453	0.001992	0.00164	0.001139	-5.13E-05	9.33E-05
1193	500000	10	150000	12	5000	0.01175	0.009935	0.009253	0.00861	0.007392	-5.65E-05	1.93E-04
1194	500000	10	150000	12	10000	0.008327	0.006573	0.005967	0.00543	0.004465	-5.45E-05	1.55E-04
1195	500000	10	150000	12	20000	0.005935	0.004245	0.003712	0.00327	0.002537	-5.26E-05	1.21E-04
1196	500000	10	150000	12	50000	0.003966	0.002357	0.001916	0.00159	0.001115	-5.03E-05	8.04E-05
1197	500000	10	150000	14	5000	0.01079	0.009024	0.008401	0.00783	0.006759	-5.37E-05	1.68E-04
1198	500000	10	150000	14	10000	0.007806	0.006095	0.005534	0.00505	0.004188	-5.24E-05	1.35E-04
1199	500000	10	150000	14	20000	0.005659	0.004	0.003499	0.00309	0.002425	-5.11E-05	1.06E-04
1200	500000	10	150000	14	50000	0.003864	0.002272	0.001847	0.00153	0.00109	-4.96E-05	7.00E-05

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
1201	500000	12	50000	6	5000	0.01509	0.01305	0.0121	0.01115	0.009288	-8.69E-05	2.89E-04
1202	500000	12	50000	6	10000	0.01017	0.008253	0.007446	0.00668	0.005274	-7.82E-05	2.25E-04
1203	500000	12	50000	6	20000	0.00697	0.005162	0.004486	0.00388	0.002866	-7.02E-05	1.66E-04
1204	500000	12	50000	6	50000	0.004462	0.002788	0.00226	0.00183	0.001214	-6.13E-05	9.85E-05
1205	500000	12	50000	8	5000	0.01443	0.01244	0.01155	0.01065	0.008923	-8.25E-05	2.64E-04
1206	500000	12	50000	8	10000	0.009828	0.007942	0.007173	0.00644	0.005122	-7.51E-05	2.03E-04
1207	500000	12	50000	8	20000	0.006817	0.005029	0.004373	0.00379	0.002815	-6.85E-05	1.48E-04
1208	500000	12	50000	8	50000	0.004463	0.002789	0.002261	0.00184	0.001216	-6.13E-05	8.60E-05
1209	500000	12	50000	10	5000	0.01378	0.01183	0.01098	0.01015	0.008535	-7.89E-05	2.40E-04
1210	500000	12	50000	10	10000	0.009496	0.00764	0.006902	0.00621	0.004962	-7.27E-05	1.83E-04
1211	500000	12	50000	10	20000	0.006673	0.004902	0.004263	0.0037	0.002762	-6.71E-05	1.32E-04
1212	500000	12	50000	10	50000	0.004464	0.00279	0.002263	0.00184	0.001218	-6.12E-05	7.61E-05
1213	500000	12	50000	12	5000	0.01315	0.01123	0.01043	0.00964	0.008136	-7.59E-05	2.19E-04
1214	500000	12	50000	12	10000	0.009182	0.00735	0.00664	0.00598	0.004797	-7.07E-05	1.66E-04
1215	500000	12	50000	12	20000	0.00654	0.004782	0.004158	0.00361	0.002707	-6.61E-05	1.19E-04
1216	500000	12	50000	12	50000	0.004464	0.00279	0.002264	0.00184	0.001219	-6.12E-05	6.79E-05
1217	500000	12	50000	14	5000	0.01254	0.01066	0.009888	0.00914	0.007733	-7.35E-05	1.99E-04
1218	500000	12	50000	14	10000	0.008886	0.007075	0.006388	0.00575	0.004632	-6.92E-05	1.51E-04
1219	500000	12	50000	14	20000	0.006416	0.00467	0.004059	0.00353	0.002651	-6.53E-05	1.08E-04
1220	500000	12	50000	14	50000	0.004464	0.002791	0.002264	0.00184	0.001221	-6.11E-05	6.10E-05
1221	500000	12	75000	6	5000	0.01456	0.01259	0.0117	0.01081	0.009064	-7.88E-05	2.76E-04
1222	500000	12	75000	6	10000	0.009842	0.007977	0.00722	0.0065	0.005176	-7.1E-05	2.18E-04
1223	500000	12	75000	6	20000	0.006736	0.004978	0.004343	0.00378	0.00282	-6.38E-05	1.65E-04
1224	500000	12	75000	6	50000	0.004277	0.002649	0.002159	0.00177	0.001189	-5.55E-05	1.03E-04
1225	500000	12	75000	8	5000	0.01374	0.01183	0.01101	0.0102	0.008608	-7.33E-05	2.47E-04
1226	500000	12	75000	8	10000	0.009397	0.007579	0.00687	0.0062	0.004983	-0.000067	1.94E-04
1227	500000	12	75000	8	20000	0.006514	0.004786	0.004182	0.00365	0.002749	-6.12E-05	1.46E-04
1228	500000	12	75000	8	50000	0.004228	0.00261	0.002128	0.00174	0.001181	-5.47E-05	8.98E-05
1229	500000	12	75000	10	5000	0.01295	0.01109	0.01033	0.00958	0.008132	-6.9E-05	2.21E-04
1230	500000	12	75000	10	10000	0.008978	0.007199	0.006531	0.00591	0.004782	-6.4E-05	1.73E-04
1231	500000	12	75000	10	20000	0.00631	0.004607	0.004028	0.00352	0.002674	-5.93E-05	1.29E-04
1232	500000	12	75000	10	50000	0.004185	0.002573	0.002098	0.00172	0.001171	-5.42E-05	7.88E-05
1233	500000	12	75000	12	5000	0.0122	0.01038	0.009668	0.00898	0.007651	-6.57E-05	1.99E-04
1234	500000	12	75000	12	10000	0.00859	0.006841	0.006206	0.00562	0.004577	-6.16E-05	1.55E-04
1235	500000	12	75000	12	20000	0.006124	0.00444	0.003882	0.0034	0.002598	-5.79E-05	1.15E-04
1236	500000	12	75000	12	50000	0.004145	0.002539	0.00207	0.0017	0.001161	-5.38E-05	6.98E-05
1237	500000	12	75000	14	5000	0.0115	0.009715	0.009038	0.00839	0.007175	-6.31E-05	1.79E-04
1238	500000	12	75000	14	10000	0.00823	0.006507	0.0059	0.00535	0.004374	-5.98E-05	1.39E-04
1239	500000	12	75000	14	20000	0.005954	0.004286	0.003745	0.00328	0.002521	-5.68E-05	1.03E-04
1240	500000	12	75000	14	50000	0.004109	0.002508	0.002044	0.00168	0.00115	-5.35E-05	6.23E-05
1241	500000	12	100000	6	5000	0.01412	0.0122	0.01136	0.01052	0.00887	-7.19E-05	2.63E-04
1242	500000	12	100000	6	10000	0.00957	0.007752	0.007036	0.00635	0.005097	-6.5E-05	2.10E-04
1243	500000	12	100000	6	20000	0.006556	0.004838	0.004236	0.0037	0.002787	-5.84E-05	1.62E-04
1244	500000	12	100000	6	50000	0.004151	0.002558	0.002095	0.00172	0.001177	-5.08E-05	1.05E-04
1245	500000	12	100000	8	5000	0.01319	0.01134	0.01058	0.00982	0.008345	-6.58E-05	2.32E-04
1246	500000	12	100000	8	10000	0.009055	0.007292	0.006632	0.00601	0.004873	-6.04E-05	1.84E-04
1247	500000	12	100000	8	20000	0.006286	0.004606	0.004042	0.00354	0.002702	-5.53E-05	1.41E-04
1248	500000	12	100000	8	50000	0.004069	0.002492	0.002043	0.00169	0.001162	-4.96E-05	9.03E-05
1249	500000	12	100000	10	5000	0.0123	0.01051	0.009812	0.00913	0.007805	-6.12E-05	2.06E-04
1250	500000	12	100000	10	10000	0.008579	0.00686	0.006246	0.00568	0.004642	-5.7E-05	1.63E-04

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
1251	500000	12	100000	10	20000	0.006043	0.004392	0.003858	0.00339	0.002613	-5.31E-05	1.24E-04
1252	500000	12	100000	10	50000	0.003997	0.002432	0.001995	0.00165	0.001146	-4.87E-05	7.88E-05
1253	500000	12	100000	12	5000	0.01148	0.009733	0.009085	0.00846	0.007268	-5.78E-05	1.83E-04
1254	500000	12	100000	12	10000	0.008145	0.00646	0.005883	0.00536	0.004409	-5.45E-05	1.45E-04
1255	500000	12	100000	12	20000	0.005824	0.004197	0.003687	0.00325	0.002522	-5.15E-05	1.10E-04
1256	500000	12	100000	12	50000	0.003932	0.002377	0.001949	0.00162	0.001129	-4.81E-05	6.94E-05
1257	500000	12	100000	14	5000	0.01072	0.009009	0.008401	0.00783	0.006745	-5.51E-05	1.63E-04
1258	500000	12	100000	14	10000	0.007748	0.006091	0.005543	0.00505	0.004181	-5.26E-05	1.29E-04
1259	500000	12	100000	14	20000	0.005626	0.004018	0.003528	0.00311	0.002432	-5.03E-05	9.80E-05
1260	500000	12	100000	14	50000	0.003875	0.002327	0.001907	0.00158	0.001111	-4.76E-05	6.16E-05
1261	500000	12	125000	6	5000	0.01374	0.01186	0.01107	0.01027	0.008698	-6.6E-05	2.51E-04
1262	500000	12	125000	6	10000	0.009337	0.007559	0.006878	0.00623	0.005027	-5.98E-05	2.02E-04
1263	500000	12	125000	6	20000	0.006406	0.004722	0.004148	0.00364	0.002761	-5.39E-05	1.57E-04
1264	500000	12	125000	6	50000	0.004054	0.00249	0.002048	0.00169	0.001169	-4.69E-05	1.04E-04
1265	500000	12	125000	8	5000	0.01272	0.01092	0.01021	0.00951	0.008117	-5.95E-05	2.19E-04
1266	500000	12	125000	8	10000	0.008771	0.007054	0.006433	0.00585	0.004779	-5.48E-05	1.76E-04
1267	500000	12	125000	8	20000	0.006102	0.004461	0.00393	0.00346	0.002665	-5.04E-05	1.36E-04
1268	500000	12	125000	8	50000	0.003948	0.002405	0.001982	0.00165	0.00115	-4.53E-05	8.95E-05
1269	500000	12	125000	10	5000	0.01177	0.01003	0.009387	0.00876	0.00753	-5.48E-05	1.92E-04
1270	500000	12	125000	10	10000	0.008256	0.006586	0.006015	0.00549	0.004525	-5.13E-05	1.54E-04
1271	500000	12	125000	10	20000	0.005831	0.004223	0.003725	0.00329	0.002565	-4.8E-05	1.19E-04
1272	500000	12	125000	10	50000	0.003855	0.002327	0.00192	0.0016	0.00113	-4.42E-05	7.77E-05
1273	500000	12	125000	12	5000	0.0109	0.009211	0.008615	0.00805	0.006953	-5.14E-05	1.70E-04
1274	500000	12	125000	12	10000	0.007791	0.006158	0.005625	0.00514	0.004272	-4.88E-05	1.36E-04
1275	500000	12	125000	12	20000	0.005589	0.004008	0.003537	0.00314	0.002464	-4.63E-05	1.05E-04
1276	500000	12	125000	12	50000	0.003774	0.002258	0.001862	0.00156	0.001108	-4.35E-05	6.81E-05
1277	500000	12	125000	14	5000	0.0101	0.008454	0.007899	0.00738	0.006399	-4.89E-05	1.50E-04
1278	500000	12	125000	14	10000	0.007371	0.005766	0.005264	0.00482	0.004025	-4.69E-05	1.20E-04
1279	500000	12	125000	14	20000	0.005374	0.003812	0.003363	0.00299	0.002364	-4.51E-05	9.28E-05
1280	500000	12	125000	14	50000	0.003701	0.002195	0.001809	0.00151	0.001085	-4.29E-05	6.02E-05
1281	500000	12	150000	6	5000	0.0134	0.01157	0.01081	0.01005	0.008542	-6.09E-05	2.40E-04
1282	500000	12	150000	6	10000	0.009134	0.007391	0.006739	0.00612	0.004965	-5.52E-05	1.94E-04
1283	500000	12	150000	6	20000	0.006278	0.004623	0.004073	0.00358	0.002738	-4.99E-05	1.53E-04
1284	500000	12	150000	6	50000	0.003974	0.002434	0.002011	0.00167	0.001164	-4.35E-05	1.03E-04
1285	500000	12	150000	8	5000	0.01232	0.01057	0.009892	0.00923	0.007916	-5.42E-05	2.08E-04
1286	500000	12	150000	8	10000	0.008529	0.006851	0.006264	0.00571	0.004696	-5.01E-05	1.68E-04
1287	500000	12	150000	8	20000	0.005947	0.00434	0.003836	0.00339	0.002633	-4.62E-05	1.32E-04
1288	500000	12	150000	8	50000	0.00385	0.002335	0.001933	0.00162	0.001142	-4.16E-05	8.81E-05
1289	500000	12	150000	10	5000	0.01132	0.009634	0.009028	0.00844	0.007292	-4.95E-05	1.81E-04
1290	500000	12	150000	10	10000	0.007986	0.006357	0.005821	0.00533	0.004424	-4.65E-05	1.46E-04
1291	500000	12	150000	10	20000	0.005655	0.004084	0.003616	0.00321	0.002524	-4.37E-05	1.14E-04
1292	500000	12	150000	10	50000	0.003742	0.002245	0.001862	0.00156	0.001117	-4.05E-05	7.61E-05
1293	500000	12	150000	12	5000	0.01042	0.00878	0.008226	0.0077	0.006687	-4.62E-05	1.59E-04
1294	500000	12	150000	12	10000	0.0075	0.005909	0.005413	0.00497	0.004156	-4.4E-05	1.28E-04
1295	500000	12	150000	12	20000	0.005398	0.003854	0.003415	0.00304	0.002415	-4.2E-05	9.98E-05
1296	500000	12	150000	12	50000	0.003648	0.002165	0.001795	0.00151	0.001092	-3.96E-05	6.64E-05
1297	500000	12	150000	14	5000	0.009604	0.008002	0.00749	0.00702	0.006112	-4.38E-05	1.40E-04
1298	500000	12	150000	14	10000	0.007064	0.005502	0.005038	0.00463	0.003896	-4.22E-05	1.13E-04
1299	500000	12	150000	14	20000	0.005171	0.003648	0.003231	0.00288	0.002308	-4.07E-05	8.81E-05
1300	500000	12	150000	14	50000	0.003565	0.002093	0.001735	0.00146	0.001065	-3.9E-05	5.85E-05

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
1301	500000	14	50000	6	5000	0.01304	0.01126	0.01054	0.00982	0.008367	-6.86E-05	2.26E-04
1302	500000	14	50000	6	10000	0.008932	0.007234	0.006613	0.00602	0.004899	-6.15E-05	1.76E-04
1303	500000	14	50000	6	20000	0.006197	0.004577	0.004046	0.00357	0.002735	-5.51E-05	1.31E-04
1304	500000	14	50000	6	50000	0.004036	0.002509	0.002083	0.00173	0.0012	-4.79E-05	7.89E-05
1305	500000	14	50000	8	5000	0.01254	0.01079	0.01011	0.00942	0.008053	-6.55E-05	2.09E-04
1306	500000	14	50000	8	10000	0.00867	0.006994	0.006396	0.00583	0.004763	-5.93E-05	1.61E-04
1307	500000	14	50000	8	20000	0.00608	0.004473	0.003955	0.00349	0.002687	-5.38E-05	1.18E-04
1308	500000	14	50000	8	50000	0.004037	0.00251	0.002084	0.00174	0.001202	-4.78E-05	6.96E-05
1309	500000	14	50000	10	5000	0.01204	0.01032	0.009658	0.00901	0.007718	-6.29E-05	1.92E-04
1310	500000	14	50000	10	10000	0.008414	0.006757	0.006179	0.00563	0.00462	-5.75E-05	1.47E-04
1311	500000	14	50000	10	20000	0.005969	0.004372	0.003866	0.00341	0.002637	-5.28E-05	1.07E-04
1312	500000	14	50000	10	50000	0.004037	0.00251	0.002085	0.00174	0.001203	-4.78E-05	6.20E-05
1313	500000	14	50000	12	5000	0.01154	0.009838	0.009207	0.00859	0.007372	-6.07E-05	1.77E-04
1314	500000	14	50000	12	10000	0.008167	0.006525	0.005965	0.00544	0.004473	-5.61E-05	1.35E-04
1315	500000	14	50000	12	20000	0.005864	0.004276	0.003779	0.00334	0.002586	-5.2E-05	9.71E-05
1316	500000	14	50000	12	50000	0.004037	0.002511	0.002085	0.00174	0.001205	-4.78E-05	5.58E-05
1317	500000	14	50000	14	5000	0.01105	0.009371	0.008762	0.00817	0.007021	-5.88E-05	1.63E-04
1318	500000	14	50000	14	10000	0.00793	0.006302	0.005756	0.00525	0.004325	-5.49E-05	1.24E-04
1319	500000	14	50000	14	20000	0.005765	0.004185	0.003697	0.00327	0.002534	-5.14E-05	8.87E-05
1320	500000	14	50000	14	50000	0.004038	0.002511	0.002086	0.00174	0.001206	-4.77E-05	5.05E-05
1321	500000	14	75000	6	5000	0.01264	0.0109	0.01022	0.00954	0.008161	-6.29E-05	2.17E-04
1322	500000	14	75000	6	10000	0.008684	0.00702	0.00643	0.00587	0.004805	-5.65E-05	1.72E-04
1323	500000	14	75000	6	20000	0.006023	0.004433	0.003929	0.00348	0.002687	-5.05E-05	1.31E-04
1324	500000	14	75000	6	50000	0.003895	0.002397	0.001996	0.00167	0.001172	-4.37E-05	8.30E-05
1325	500000	14	75000	8	5000	0.01201	0.01031	0.00967	0.00903	0.007764	-5.89E-05	1.97E-04
1326	500000	14	75000	8	10000	0.008343	0.006709	0.006149	0.00562	0.004631	-5.35E-05	1.55E-04
1327	500000	14	75000	8	20000	0.005852	0.004281	0.003797	0.00337	0.002619	-4.86E-05	1.17E-04
1328	500000	14	75000	8	50000	0.003857	0.002365	0.00197	0.00165	0.001162	-4.31E-05	7.29E-05
1329	500000	14	75000	10	5000	0.01139	0.009717	0.009114	0.00852	0.007348	-5.57E-05	1.79E-04
1330	500000	14	75000	10	10000	0.008015	0.006405	0.005872	0.00537	0.004448	-5.12E-05	1.40E-04
1331	500000	14	75000	10	20000	0.005692	0.004138	0.00367	0.00326	0.002548	-4.72E-05	1.05E-04
1332	500000	14	75000	10	50000	0.003823	0.002335	0.001945	0.00163	0.001152	-4.27E-05	6.47E-05
1333	500000	14	75000	12	5000	0.01078	0.009139	0.008566	0.00801	0.006924	-5.32E-05	1.63E-04
1334	500000	14	75000	12	10000	0.007703	0.006114	0.005603	0.00513	0.004263	-4.94E-05	1.27E-04
1335	500000	14	75000	12	20000	0.005543	0.004002	0.003549	0.00315	0.002476	-4.6E-05	9.48E-05
1336	500000	14	75000	12	50000	0.003791	0.002307	0.001921	0.00161	0.001141	-4.23E-05	5.78E-05
1337	500000	14	75000	14	5000	0.0102	0.008583	0.008037	0.00752	0.006504	-5.11E-05	1.49E-04
1338	500000	14	75000	14	10000	0.007409	0.005836	0.005344	0.0049	0.004078	-4.8E-05	1.16E-04
1339	500000	14	75000	14	20000	0.005405	0.003875	0.003433	0.00305	0.002404	-4.52E-05	8.59E-05
1340	500000	14	75000	14	50000	0.003762	0.002281	0.001898	0.00159	0.00113	-4.21E-05	5.20E-05
1341	500000	14	100000	6	5000	0.0123	0.01059	0.009942	0.00929	0.00798	-0.000058	2.08E-04
1342	500000	14	100000	6	10000	0.008478	0.006842	0.006279	0.00574	0.004727	-5.21E-05	1.67E-04
1343	500000	14	100000	6	20000	0.005887	0.004322	0.00384	0.00341	0.002652	-4.67E-05	1.29E-04
1344	500000	14	100000	6	50000	0.0038	0.002323	0.00194	0.00163	0.001156	-4.03E-05	8.42E-05
1345	500000	14	100000	8	5000	0.01157	0.009906	0.009304	0.00871	0.007518	-5.34E-05	1.87E-04
1346	500000	14	100000	8	10000	0.008078	0.006478	0.005951	0.00545	0.004523	-4.87E-05	1.49E-04
1347	500000	14	100000	8	20000	0.005678	0.004137	0.00368	0.00328	0.00257	-4.43E-05	1.14E-04
1348	500000	14	100000	8	50000	0.003735	0.002269	0.001897	0.0016	0.00114	-3.93E-05	7.37E-05
1349	500000	14	100000	10	5000	0.01086	0.009233	0.008672	0.00813	0.007042	-4.99E-05	1.68E-04
1350	500000	14	100000	10	10000	0.0077	0.006128	0.005631	0.00517	0.004312	-4.61E-05	1.33E-04

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
1351	500000	14	100000	10	20000	0.005485	0.003964	0.003527	0.00315	0.002485	-4.26E-05	1.02E-04
1352	500000	14	100000	10	50000	0.003677	0.002219	0.001855	0.00157	0.001123	-3.86E-05	6.50E-05
1353	500000	14	100000	12	5000	0.01018	0.008588	0.008061	0.00756	0.006566	-4.72E-05	1.51E-04
1354	500000	14	100000	12	10000	0.007346	0.005797	0.005325	0.00489	0.0041	-4.41E-05	1.20E-04
1355	500000	14	100000	12	20000	0.005307	0.003802	0.003382	0.00302	0.0024	-4.13E-05	9.11E-05
1356	500000	14	100000	12	50000	0.003625	0.002174	0.001816	0.00153	0.001105	-3.81E-05	5.78E-05
1357	500000	14	100000	14	5000	0.009547	0.007978	0.00748	0.00701	0.006101	-4.5E-05	1.36E-04
1358	500000	14	100000	14	10000	0.007016	0.005486	0.005035	0.00463	0.00389	-4.26E-05	1.08E-04
1359	500000	14	100000	14	20000	0.005145	0.003652	0.003246	0.0029	0.002314	-4.03E-05	8.20E-05
1360	500000	14	100000	14	50000	0.003578	0.002131	0.001779	0.0015	0.001087	-3.77E-05	5.18E-05
1361	500000	14	125000	6	5000	0.012	0.01032	0.009695	0.00907	0.007818	-5.37E-05	2.00E-04
1362	500000	14	125000	6	10000	0.008298	0.006688	0.006147	0.00563	0.004659	-4.83E-05	1.61E-04
1363	500000	14	125000	6	20000	0.005772	0.004229	0.003765	0.00335	0.002624	-4.33E-05	1.26E-04
1364	500000	14	125000	6	50000	0.003725	0.002267	0.001899	0.0016	0.001146	-3.74E-05	8.42E-05
1365	500000	14	125000	8	5000	0.01119	0.009559	0.008989	0.00843	0.007303	-4.88E-05	1.78E-04
1366	500000	14	125000	8	10000	0.007854	0.006283	0.005782	0.00531	0.00443	-4.45E-05	1.43E-04
1367	500000	14	125000	8	20000	0.005534	0.004019	0.003584	0.0032	0.002531	-4.06E-05	1.11E-04
1368	500000	14	125000	8	50000	0.003642	0.002197	0.001842	0.00156	0.001125	-3.61E-05	7.33E-05
1369	500000	14	125000	10	5000	0.01042	0.008828	0.008301	0.00779	0.006781	-4.51E-05	1.58E-04
1370	500000	14	125000	10	10000	0.00744	0.005899	0.005432	0.005	0.004197	-4.18E-05	1.27E-04
1371	500000	14	125000	10	20000	0.005317	0.003824	0.003412	0.00306	0.002435	-3.87E-05	9.81E-05
1372	500000	14	125000	10	50000	0.003567	0.002133	0.001789	0.00152	0.001103	-3.53E-05	6.44E-05
1373	500000	14	125000	12	5000	0.009693	0.008137	0.007646	0.00718	0.006267	-4.23E-05	1.41E-04
1374	500000	14	125000	12	10000	0.007056	0.00554	0.0051	0.0047	0.003965	-3.97E-05	1.13E-04
1375	500000	14	125000	12	20000	0.00512	0.003644	0.003251	0.00292	0.002339	-3.73E-05	8.73E-05
1376	500000	14	125000	12	50000	0.0035	0.002075	0.001739	0.00148	0.001081	-3.46E-05	5.70E-05
1377	500000	14	125000	14	5000	0.009024	0.007493	0.007032	0.0066	0.005773	-4.02E-05	1.26E-04
1378	500000	14	125000	14	10000	0.006702	0.005206	0.004787	0.00442	0.003737	-3.82E-05	1.01E-04
1379	500000	14	125000	14	20000	0.004941	0.003479	0.003101	0.00278	0.002244	-3.63E-05	7.82E-05
1380	500000	14	125000	14	50000	0.003441	0.002021	0.001693	0.00144	0.001058	-3.42E-05	5.08E-05
1381	500000	14	150000	6	5000	0.01172	0.01007	0.009473	0.00888	0.00767	-5E-05	1.92E-04
1382	500000	14	150000	6	10000	0.008139	0.006551	0.00603	0.00554	0.004597	-4.5E-05	1.56E-04
1383	500000	14	150000	6	20000	0.005673	0.004148	0.003701	0.0033	0.002599	-4.04E-05	1.23E-04
1384	500000	14	150000	6	50000	0.003664	0.002221	0.001866	0.00158	0.001138	-3.48E-05	8.34E-05
1385	500000	14	150000	8	5000	0.01086	0.009256	0.008713	0.00818	0.007112	-4.48E-05	1.70E-04
1386	500000	14	150000	8	10000	0.00766	0.006114	0.005636	0.00519	0.004348	-4.1E-05	1.37E-04
1387	500000	14	150000	8	20000	0.005412	0.003918	0.003502	0.00314	0.002497	-3.75E-05	1.07E-04
1388	500000	14	150000	8	50000	0.003566	0.002139	0.001799	0.00153	0.001114	-3.34E-05	7.23E-05
1389	500000	14	150000	10	5000	0.01004	0.008481	0.007984	0.00751	0.006554	-4.1E-05	1.50E-04
1390	500000	14	150000	10	10000	0.007218	0.005705	0.005262	0.00486	0.004097	-3.81E-05	1.21E-04
1391	500000	14	150000	10	20000	0.005177	0.003708	0.003316	0.00298	0.002393	-3.55E-05	9.45E-05
1392	500000	14	150000	10	50000	0.003478	0.002064	0.001737	0.00148	0.001088	-3.24E-05	6.33E-05
1393	500000	14	150000	12	5000	0.009284	0.007759	0.007298	0.00687	0.006013	-3.83E-05	1.33E-04
1394	500000	14	150000	12	10000	0.006813	0.005325	0.00491	0.00454	0.003849	-3.61E-05	1.07E-04
1395	500000	14	150000	12	20000	0.004966	0.003515	0.003143	0.00283	0.002289	-3.4E-05	8.37E-05
1396	500000	14	150000	12	50000	0.003401	0.001996	0.001679	0.00144	0.001062	-3.17E-05	5.58E-05
1397	500000	14	150000	14	5000	0.008593	0.007094	0.006663	0.00627	0.005499	-3.62E-05	1.18E-04
1398	500000	14	150000	14	10000	0.006442	0.004975	0.004583	0.00424	0.003608	-3.45E-05	9.56E-05
1399	500000	14	150000	14	20000	0.004774	0.003338	0.002983	0.00269	0.002186	-3.3E-05	7.46E-05
1400	500000	14	150000	14	50000	0.003332	0.001935	0.001626	0.00139	0.001036	-3.12E-05	4.96E-05

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
1401	1000000	2	50000	6	5000	0.04457	0.03034	0.02368	0.01864	0.01187	-0.000269	1.98E-03
1402	1000000	2	50000	6	10000	0.02927	0.01726	0.01254	0.00939	0.005692	-0.000245	1.46E-03
1403	1000000	2	50000	6	20000	0.01952	0.009529	0.006384	0.00459	0.002734	-0.000222	1.00E-03
1404	1000000	2	50000	6	50000	0.01208	0.004217	0.002497	0.00175	0.001063	-0.000197	5.34E-04
1405	1000000	2	50000	8	5000	0.03871	0.0267	0.02149	0.01749	0.0118	-0.000232	1.51E-03
1406	1000000	2	50000	8	10000	0.02632	0.0157	0.01178	0.00912	0.005772	-0.000221	1.13E-03
1407	1000000	2	50000	8	20000	0.0183	0.009001	0.006197	0.00457	0.002778	-0.00021	7.90E-04
1408	1000000	2	50000	8	50000	0.01208	0.004226	0.002508	0.00176	0.001067	-0.000197	4.27E-04
1409	1000000	2	50000	10	5000	0.03443	0.02376	0.01951	0.01627	0.01149	-0.000213	1.18E-03
1410	1000000	2	50000	10	10000	0.02413	0.01437	0.01102	0.00874	0.005756	-0.000209	8.94E-04
1411	1000000	2	50000	10	20000	0.01737	0.008521	0.005976	0.00449	0.002802	-0.000203	6.29E-04
1412	1000000	2	50000	10	50000	0.01207	0.004231	0.002516	0.00177	0.001071	-0.000196	3.44E-04
1413	1000000	2	50000	12	5000	0.03122	0.02138	0.01779	0.0151	0.01104	-0.000203	9.39E-04
1414	1000000	2	50000	12	10000	0.02246	0.01326	0.01031	0.00833	0.005672	-0.000201	7.18E-04
1415	1000000	2	50000	12	20000	0.01666	0.008098	0.005747	0.00439	0.002806	-0.000199	5.09E-04
1416	1000000	2	50000	12	50000	0.01207	0.004234	0.002521	0.00177	0.001075	-0.000196	2.80E-04
1417	1000000	2	50000	14	5000	0.02873	0.01945	0.01631	0.01403	0.01054	-0.000197	7.62E-04
1418	1000000	2	50000	14	10000	0.02115	0.01232	0.009659	0.00792	0.005544	-0.000197	5.86E-04
1419	1000000	2	50000	14	20000	0.01609	0.00773	0.005523	0.00428	0.002792	-0.000197	4.17E-04
1420	1000000	2	50000	14	50000	0.01207	0.004235	0.002525	0.00178	0.001079	-0.000196	2.30E-04
1421	1000000	2	75000	6	5000	0.03967	0.02826	0.02274	0.01834	0.01205	-0.000193	1.66E-03
1422	1000000	2	75000	6	10000	0.02602	0.01628	0.01227	0.00942	0.005827	-0.000179	1.26E-03
1423	1000000	2	75000	6	20000	0.01722	0.00907	0.00635	0.00466	0.002791	-0.000165	9.06E-04
1424	1000000	2	75000	6	50000	0.01038	0.004008	0.002523	0.00179	0.001075	-0.000148	5.16E-04
1425	1000000	2	75000	8	5000	0.03373	0.0244	0.02026	0.01691	0.01183	-0.000161	1.24E-03
1426	1000000	2	75000	8	10000	0.02284	0.01451	0.01133	0.00901	0.005878	-0.000157	9.58E-04
1427	1000000	2	75000	8	20000	0.01571	0.008377	0.00607	0.0046	0.002845	-0.000152	6.99E-04
1428	1000000	2	75000	8	50000	0.01006	0.003907	0.002505	0.0018	0.001086	-0.000145	4.05E-04
1429	1000000	2	75000	10	5000	0.02952	0.0214	0.01813	0.0155	0.01135	-0.000146	9.48E-04
1430	1000000	2	75000	10	10000	0.02054	0.01305	0.01043	0.00852	0.005807	-0.000146	7.44E-04
1431	1000000	2	75000	10	20000	0.01459	0.007769	0.005762	0.00447	0.002862	-0.000145	5.48E-04
1432	1000000	2	75000	10	50000	0.00983	0.003807	0.002473	0.0018	0.001096	-0.000143	3.22E-04
1433	1000000	2	75000	12	5000	0.02642	0.01903	0.01634	0.01421	0.01077	-0.000139	7.46E-04
1434	1000000	2	75000	12	10000	0.01882	0.01186	0.009627	0.00801	0.005662	-0.00014	5.90E-04
1435	1000000	2	75000	12	20000	0.01375	0.007248	0.005458	0.00432	0.002849	-0.000141	4.38E-04
1436	1000000	2	75000	12	50000	0.00965	0.003714	0.002433	0.00179	0.001103	-0.000142	2.59E-04
1437	1000000	2	75000	14	5000	0.02404	0.01712	0.01483	0.01305	0.01016	-0.000135	6.01E-04
1438	1000000	2	75000	14	10000	0.01749	0.01088	0.008915	0.00753	0.005476	-0.000137	4.77E-04
1439	1000000	2	75000	14	20000	0.01309	0.006803	0.005172	0.00415	0.002814	-0.000139	3.56E-04
1440	1000000	2	75000	14	50000	0.009508	0.003631	0.002389	0.00177	0.001106	-0.000141	2.12E-04
1441	1000000	2	100000	6	5000	0.03642	0.02679	0.022	0.01804	0.01214	-0.000144	1.44E-03
1442	1000000	2	100000	6	10000	0.02387	0.01558	0.01204	0.0094	0.005919	-0.000136	1.12E-03
1443	1000000	2	100000	6	20000	0.01574	0.00876	0.006313	0.0047	0.002837	-0.000128	8.23E-04
1444	1000000	2	100000	6	50000	0.00934	0.003894	0.00254	0.00182	0.001086	-0.000117	4.91E-04
1445	1000000	2	100000	8	5000	0.03057	0.02287	0.01937	0.01642	0.01178	-0.000117	1.06E-03
1446	1000000	2	100000	8	10000	0.02063	0.01371	0.01098	0.00889	0.005935	-0.000117	8.35E-04
1447	1000000	2	100000	8	20000	0.0141	0.007974	0.005965	0.0046	0.002892	-0.000115	6.26E-04
1448	1000000	2	100000	8	50000	0.00887	0.00373	0.002501	0.00182	0.001102	-0.000112	3.81E-04
1449	1000000	2	100000	10	5000	0.0265	0.01988	0.01718	0.0149	0.01119	-0.000106	8.02E-04
1450	1000000	2	100000	10	10000	0.01833	0.0122	0.01001	0.00832	0.005816	-0.000108	6.42E-04

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
1451	1000000	2	100000	10	20000	0.01291	0.0073	0.005601	0.00443	0.002899	-0.000109	4.86E-04
1452	1000000	2	100000	10	50000	0.008522	0.003574	0.002442	0.00181	0.001114	-0.00011	3.00E-04
1453	1000000	2	100000	12	5000	0.02352	0.01755	0.01537	0.01355	0.01052	-0.0001	6.28E-04
1454	1000000	2	100000	12	10000	0.01663	0.01099	0.009154	0.00776	0.005625	-0.000104	5.05E-04
1455	1000000	2	100000	12	20000	0.01202	0.006733	0.005253	0.00425	0.00287	-0.000106	3.86E-04
1456	1000000	2	100000	12	50000	0.008257	0.003432	0.002375	0.00179	0.001121	-0.000108	2.40E-04
1457	1000000	2	100000	14	5000	0.02125	0.01569	0.01385	0.01236	0.009836	-9.81E-05	5.04E-04
1458	1000000	2	100000	14	10000	0.01532	0.009995	0.008413	0.00723	0.005399	-0.000102	4.07E-04
1459	1000000	2	100000	14	20000	0.01133	0.006254	0.004933	0.00405	0.002817	-0.000105	3.12E-04
1460	1000000	2	100000	14	50000	0.008051	0.003307	0.002306	0.00176	0.001122	-0.000108	1.95E-04
1461	1000000	2	125000	6	5000	0.03406	0.02568	0.02139	0.01775	0.01217	-0.00011	1.28E-03
1462	1000000	2	125000	6	10000	0.02231	0.01505	0.01184	0.00936	0.005984	-0.000106	1.01E-03
1463	1000000	2	125000	6	20000	0.01468	0.008523	0.006272	0.00473	0.002874	-0.000102	7.56E-04
1464	1000000	2	125000	6	50000	0.008624	0.003816	0.002551	0.00184	0.001095	-9.47E-05	4.65E-04
1465	1000000	2	125000	8	5000	0.02835	0.02174	0.01868	0.01602	0.0117	-8.75E-05	9.30E-04
1466	1000000	2	125000	8	10000	0.01907	0.01311	0.01069	0.00877	0.005964	-8.89E-05	7.44E-04
1467	1000000	2	125000	8	20000	0.01297	0.007676	0.005873	0.00459	0.002926	-8.96E-05	5.69E-04
1468	1000000	2	125000	8	50000	0.008059	0.00361	0.002494	0.00184	0.001115	-8.94E-05	3.58E-04
1469	1000000	2	125000	10	5000	0.02441	0.01879	0.01646	0.01443	0.01103	-7.86E-05	7.02E-04
1470	1000000	2	125000	10	10000	0.0168	0.01159	0.009674	0.00815	0.005806	-8.18E-05	5.68E-04
1471	1000000	2	125000	10	20000	0.01175	0.006965	0.00547	0.00439	0.002922	-8.45E-05	4.39E-04
1472	1000000	2	125000	10	50000	0.007646	0.003418	0.002416	0.00182	0.001129	-8.7E-05	2.80E-04
1473	1000000	2	125000	12	5000	0.02155	0.01651	0.01465	0.01305	0.0103	-7.51E-05	5.47E-04
1474	1000000	2	125000	12	10000	0.01514	0.01037	0.008794	0.00755	0.005579	-7.89E-05	4.45E-04
1475	1000000	2	125000	12	20000	0.01085	0.006372	0.005093	0.00418	0.002879	-8.23E-05	3.46E-04
1476	1000000	2	125000	12	50000	0.007335	0.003246	0.00233	0.00179	0.001134	-8.59E-05	2.23E-04
1477	1000000	2	125000	14	5000	0.01937	0.01469	0.01314	0.01184	0.009569	-7.39E-05	4.38E-04
1478	1000000	2	125000	14	10000	0.01386	0.009382	0.00804	0.007	0.005323	-7.79E-05	3.57E-04
1479	1000000	2	125000	14	20000	0.01015	0.005877	0.004752	0.00396	0.002811	-8.15E-05	2.79E-04
1480	1000000	2	125000	14	50000	0.007094	0.003096	0.002244	0.00174	0.001133	-8.55E-05	1.80E-04
1481	1000000	2	150000	6	5000	0.03226	0.02479	0.02089	0.0175	0.01218	-8.47E-05	1.16E-03
1482	1000000	2	150000	6	10000	0.02112	0.01461	0.01166	0.00932	0.006032	-8.36E-05	9.20E-04
1483	1000000	2	150000	6	20000	0.01386	0.008331	0.00623	0.00474	0.002905	-8.15E-05	7.00E-04
1484	1000000	2	150000	6	50000	0.008088	0.003756	0.002559	0.00185	0.001103	-7.79E-05	4.42E-04
1485	1000000	2	150000	8	5000	0.02668	0.02087	0.01812	0.01568	0.01162	-6.6E-05	8.36E-04
1486	1000000	2	150000	8	10000	0.01791	0.01265	0.01045	0.00867	0.005978	-6.88E-05	6.75E-04
1487	1000000	2	150000	8	20000	0.01213	0.007442	0.005791	0.00458	0.002952	-7.1E-05	5.22E-04
1488	1000000	2	150000	8	50000	0.007463	0.003519	0.002486	0.00185	0.001127	-7.27E-05	3.37E-04
1489	1000000	2	150000	10	5000	0.02287	0.01796	0.01589	0.01405	0.01088	-5.93E-05	6.29E-04
1490	1000000	2	150000	10	10000	0.01567	0.01111	0.009402	0.008	0.005787	-6.33E-05	5.12E-04
1491	1000000	2	150000	10	20000	0.0109	0.006706	0.005359	0.00435	0.002937	-6.68E-05	4.01E-04
1492	1000000	2	150000	10	50000	0.007011	0.003302	0.002392	0.00182	0.001141	-7.05E-05	2.62E-04
1493	1000000	2	150000	12	5000	0.0201	0.01572	0.01408	0.01264	0.0101	-5.71E-05	4.89E-04
1494	1000000	2	150000	12	10000	0.01404	0.009899	0.008507	0.00737	0.005532	-6.14E-05	4.00E-04
1495	1000000	2	150000	12	20000	0.009996	0.006099	0.004962	0.00412	0.002881	-6.53E-05	3.15E-04
1496	1000000	2	150000	12	50000	0.006672	0.00311	0.002292	0.00178	0.001144	-6.97E-05	2.08E-04
1497	1000000	2	150000	14	5000	0.01798	0.01394	0.01259	0.01142	0.00934	-5.69E-05	3.90E-04
1498	1000000	2	150000	14	10000	0.0128	0.008921	0.007746	0.00681	0.005253	-6.11E-05	3.21E-04
1499	1000000	2	150000	14	20000	0.009302	0.005596	0.004607	0.00388	0.002802	-6.5E-05	2.53E-04
1500	1000000	2	150000	14	50000	0.00641	0.002944	0.002193	0.00173	0.00114	-6.95E-05	1.68E-04

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
1501	1000000	4	50000	6	5000	0.02939	0.02328	0.01948	0.01612	0.01084	-0.000205	9.96E-04
1502	1000000	4	50000	6	10000	0.01925	0.01396	0.01103	0.00866	0.00536	-0.000185	7.43E-04
1503	1000000	4	50000	6	20000	0.01275	0.008225	0.006037	0.00446	0.002563	-0.000166	5.21E-04
1504	1000000	4	50000	6	50000	0.00776	0.004062	0.00262	0.00177	0.0009523	-0.000145	2.87E-04
1505	1000000	4	50000	8	5000	0.02657	0.02107	0.0178	0.01494	0.0104	-0.000186	8.36E-04
1506	1000000	4	50000	8	10000	0.01783	0.01294	0.01032	0.00823	0.005278	-0.000173	6.26E-04
1507	1000000	4	50000	8	20000	0.01216	0.007839	0.005803	0.00435	0.002566	-0.000159	4.39E-04
1508	1000000	4	50000	8	50000	0.007762	0.004067	0.002627	0.00177	0.0009565	-0.000145	2.41E-04
1509	1000000	4	50000	10	5000	0.02416	0.01909	0.01622	0.01376	0.009829	-0.000174	7.04E-04
1510	1000000	4	50000	10	10000	0.01664	0.01202	0.009654	0.00779	0.00514	-0.000164	5.29E-04
1511	1000000	4	50000	10	20000	0.01167	0.007488	0.005572	0.00422	0.00255	-0.000155	3.72E-04
1512	1000000	4	50000	10	50000	0.007762	0.004069	0.002631	0.00178	0.0009604	-0.000145	2.05E-04
1513	1000000	4	50000	12	5000	0.02211	0.01735	0.01478	0.01263	0.009192	-0.000165	5.97E-04
1514	1000000	4	50000	12	10000	0.01562	0.01121	0.009034	0.00735	0.004962	-0.000158	4.50E-04
1515	1000000	4	50000	12	20000	0.01124	0.007174	0.005352	0.00408	0.002519	-0.000152	3.18E-04
1516	1000000	4	50000	12	50000	0.007761	0.004071	0.002634	0.00178	0.0009639	-0.000145	1.75E-04
1517	1000000	4	50000	14	5000	0.02035	0.01582	0.01348	0.01156	0.008529	-0.000159	5.11E-04
1518	1000000	4	50000	14	10000	0.01475	0.0105	0.008466	0.00693	0.004758	-0.000154	3.87E-04
1519	1000000	4	50000	14	20000	0.01088	0.006894	0.005146	0.00395	0.002476	-0.00015	2.73E-04
1520	1000000	4	50000	14	50000	0.00776	0.004071	0.002635	0.00179	0.0009669	-0.000145	1.51E-04
1521	1000000	4	75000	6	5000	0.02721	0.02184	0.01853	0.01556	0.01075	-0.000174	8.96E-04
1522	1000000	4	75000	6	10000	0.01785	0.01317	0.01059	0.00847	0.005395	-0.000158	6.86E-04
1523	1000000	4	75000	6	20000	0.01179	0.007759	0.005828	0.0044	0.002602	-0.000143	5.00E-04
1524	1000000	4	75000	6	50000	0.007043	0.003769	0.002517	0.00175	0.0009709	-0.000125	2.93E-04
1525	1000000	4	75000	8	5000	0.02404	0.01932	0.01659	0.01416	0.01016	-0.000154	7.32E-04
1526	1000000	4	75000	8	10000	0.01617	0.01194	0.009735	0.00794	0.005271	-0.000144	5.64E-04
1527	1000000	4	75000	8	20000	0.01099	0.007235	0.005506	0.00424	0.002599	-0.000134	4.12E-04
1528	1000000	4	75000	8	50000	0.00688	0.003679	0.002474	0.00174	0.0009788	-0.000123	2.42E-04
1529	1000000	4	75000	10	5000	0.02142	0.01715	0.01482	0.0128	0.009428	-0.000141	6.03E-04
1530	1000000	4	75000	10	10000	0.0148	0.01089	0.008948	0.0074	0.005073	-0.000135	4.68E-04
1531	1000000	4	75000	10	20000	0.01034	0.006773	0.005197	0.00406	0.002567	-0.000129	3.43E-04
1532	1000000	4	75000	10	50000	0.006746	0.003595	0.002428	0.00172	0.0009831	-0.000121	2.02E-04
1533	1000000	4	75000	12	5000	0.01923	0.01528	0.01324	0.01152	0.008642	-0.000133	5.03E-04
1534	1000000	4	75000	12	10000	0.01367	0.009975	0.008235	0.00687	0.004831	-0.000129	3.92E-04
1535	1000000	4	75000	12	20000	0.0098	0.006369	0.00491	0.00388	0.002514	-0.000125	2.89E-04
1536	1000000	4	75000	12	50000	0.006633	0.00352	0.002383	0.0017	0.0009838	-0.00012	1.71E-04
1537	1000000	4	75000	14	5000	0.01739	0.01366	0.01184	0.01034	0.007855	-0.000127	4.25E-04
1538	1000000	4	75000	14	10000	0.01272	0.009182	0.007591	0.00638	0.004563	-0.000125	3.32E-04
1539	1000000	4	75000	14	20000	0.009349	0.006016	0.004645	0.00369	0.002445	-0.000123	2.46E-04
1540	1000000	4	75000	14	50000	0.006539	0.003452	0.002338	0.00168	0.0009813	-0.000119	1.46E-04
1541	1000000	4	100000	6	5000	0.02557	0.02074	0.01779	0.01511	0.01065	-0.00015	8.16E-04
1542	1000000	4	100000	6	10000	0.01681	0.01257	0.01025	0.00831	0.005414	-0.000137	6.35E-04
1543	1000000	4	100000	6	20000	0.0111	0.007434	0.005683	0.00436	0.002632	-0.000125	4.73E-04
1544	1000000	4	100000	6	50000	0.006571	0.003594	0.002462	0.00175	0.0009854	-0.00011	2.89E-04
1545	1000000	4	100000	8	5000	0.02222	0.01806	0.01569	0.01356	0.009924	-0.00013	6.54E-04
1546	1000000	4	100000	8	10000	0.01499	0.01124	0.009309	0.00771	0.005247	-0.000123	5.13E-04
1547	1000000	4	100000	8	20000	0.01018	0.006828	0.005306	0.00416	0.002621	-0.000116	3.85E-04
1548	1000000	4	100000	8	50000	0.00631	0.003448	0.002391	0.00173	0.0009953	-0.000107	2.36E-04
1549	1000000	4	100000	10	5000	0.01951	0.0158	0.01382	0.01207	0.009074	-0.000118	5.31E-04
1550	1000000	4	100000	10	10000	0.01354	0.01011	0.008454	0.0071	0.005	-0.000114	4.19E-04

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
1551	1000000	4	100000	10	20000	0.009447	0.006305	0.00495	0.00395	0.002574	-0.00011	3.16E-04
1552	1000000	4	100000	10	50000	0.006099	0.003316	0.002316	0.0017	0.0009989	-0.000104	1.95E-04
1553	1000000	4	100000	12	5000	0.01729	0.01387	0.01217	0.01071	0.008188	-0.000111	4.39E-04
1554	1000000	4	100000	12	10000	0.01236	0.00915	0.007689	0.00653	0.004707	-0.000109	3.48E-04
1555	1000000	4	100000	12	20000	0.008852	0.005855	0.004624	0.00373	0.002501	-0.000106	2.63E-04
1556	1000000	4	100000	12	50000	0.005926	0.003199	0.002244	0.00166	0.0009966	-0.000103	1.63E-04
1557	1000000	4	100000	14	5000	0.01544	0.01222	0.01072	0.00947	0.007325	-0.000106	3.67E-04
1558	1000000	4	100000	14	10000	0.01138	0.008323	0.007005	0.00599	0.004394	-0.000105	2.93E-04
1559	1000000	4	100000	14	20000	0.00836	0.005466	0.004328	0.00352	0.002411	-0.000104	2.22E-04
1560	1000000	4	100000	14	50000	0.005783	0.003096	0.002174	0.00162	0.0009894	-0.000102	1.38E-04
1561	1000000	4	125000	6	5000	0.02426	0.01986	0.01718	0.01472	0.01053	-0.000131	7.51E-04
1562	1000000	4	125000	6	10000	0.01599	0.0121	0.009982	0.00818	0.005421	-0.000121	5.91E-04
1563	1000000	4	125000	6	20000	0.01056	0.007182	0.00557	0.00433	0.002656	-0.000111	4.48E-04
1564	1000000	4	125000	6	50000	0.006221	0.003471	0.002427	0.00175	0.0009975	-9.83E-05	2.82E-04
1565	1000000	4	125000	8	5000	0.02083	0.01709	0.01498	0.01306	0.009705	-0.000112	5.93E-04
1566	1000000	4	125000	8	10000	0.01409	0.0107	0.008973	0.00751	0.005215	-0.000107	4.71E-04
1567	1000000	4	125000	8	20000	0.009567	0.006523	0.005152	0.0041	0.002635	-0.000101	3.60E-04
1568	1000000	4	125000	8	50000	0.005895	0.003288	0.002335	0.00172	0.001008	-9.41E-05	2.28E-04
1569	1000000	4	125000	10	5000	0.01809	0.01478	0.01304	0.01149	0.008762	-0.000101	4.78E-04
1570	1000000	4	125000	10	10000	0.0126	0.009533	0.008074	0.00686	0.004926	-9.83E-05	3.81E-04
1571	1000000	4	125000	10	20000	0.008789	0.005963	0.004766	0.00386	0.002573	-9.55E-05	2.93E-04
1572	1000000	4	125000	10	50000	0.005635	0.003125	0.002241	0.00168	0.001011	-9.16E-05	1.87E-04
1573	1000000	4	125000	12	5000	0.01586	0.01282	0.01135	0.01007	0.007805	-9.44E-05	3.91E-04
1574	1000000	4	125000	12	10000	0.0114	0.008546	0.007278	0.00625	0.004593	-9.34E-05	3.14E-04
1575	1000000	4	125000	12	20000	0.008165	0.005487	0.004415	0.00362	0.002484	-9.21E-05	2.42E-04
1576	1000000	4	125000	12	50000	0.005426	0.002982	0.002151	0.00163	0.001005	-9E-05	1.55E-04
1577	1000000	4	125000	14	5000	0.01402	0.01117	0.009891	0.00881	0.006895	-9.04E-05	3.24E-04
1578	1000000	4	125000	14	10000	0.01041	0.007702	0.006571	0.00568	0.004246	-9.03E-05	2.62E-04
1579	1000000	4	125000	14	20000	0.007653	0.005078	0.004099	0.0034	0.002378	-8.99E-05	2.03E-04
1580	1000000	4	125000	14	50000	0.005253	0.002857	0.002065	0.00158	0.0009936	-8.9E-05	1.31E-04
1581	1000000	4	150000	6	5000	0.0232	0.01914	0.01667	0.01438	0.01042	-0.000116	6.98E-04
1582	1000000	4	150000	6	10000	0.01531	0.01172	0.009751	0.00806	0.00542	-0.000107	5.54E-04
1583	1000000	4	150000	6	20000	0.01012	0.006976	0.005475	0.0043	0.002675	-9.91E-05	4.25E-04
1584	1000000	4	150000	6	50000	0.005944	0.003377	0.0024	0.00175	0.001008	-8.86E-05	2.74E-04
1585	1000000	4	150000	8	5000	0.01972	0.01631	0.0144	0.01263	0.009502	-9.75E-05	5.46E-04
1586	1000000	4	150000	8	10000	0.01338	0.01027	0.008698	0.00735	0.005178	-9.36E-05	4.37E-04
1587	1000000	4	150000	8	20000	0.00908	0.00628	0.005028	0.00405	0.002644	-8.95E-05	3.38E-04
1588	1000000	4	150000	8	50000	0.005572	0.003166	0.002293	0.00171	0.001019	-0.000084	2.20E-04
1589	1000000	4	150000	10	5000	0.01697	0.01397	0.01242	0.01101	0.008486	-8.76E-05	4.36E-04
1590	1000000	4	150000	10	10000	0.01187	0.009077	0.007768	0.00667	0.004853	-8.6E-05	3.51E-04
1591	1000000	4	150000	10	20000	0.008276	0.005697	0.004619	0.00379	0.002568	-8.41E-05	2.73E-04
1592	1000000	4	150000	10	50000	0.00528	0.002982	0.002185	0.00166	0.00102	-8.14E-05	1.79E-04
1593	1000000	4	150000	12	5000	0.01475	0.01201	0.01071	0.00956	0.007477	-8.18E-05	3.54E-04
1594	1000000	4	150000	12	10000	0.01067	0.008076	0.006951	0.00603	0.004489	-8.15E-05	2.87E-04
1595	1000000	4	150000	12	20000	0.007637	0.005205	0.004251	0.00353	0.002465	-8.09E-05	2.24E-04
1596	1000000	4	150000	12	50000	0.005047	0.002821	0.002082	0.00161	0.001011	-7.98E-05	1.48E-04
1597	1000000	4	150000	14	5000	0.01293	0.01037	0.009241	0.00828	0.006537	-7.84E-05	2.93E-04
1598	1000000	4	150000	14	10000	0.009672	0.007224	0.006229	0.00543	0.004115	-7.88E-05	2.39E-04
1599	1000000	4	150000	14	20000	0.007115	0.004784	0.003922	0.00329	0.002345	-7.9E-05	1.87E-04
1600	1000000	4	150000	14	50000	0.004856	0.002682	0.001985	0.00155	0.0009956	-7.88E-05	1.24E-04

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
1601	1000000	6	50000	6	5000	0.02247	0.01928	0.01716	0.0151	0.01145	-0.000139	5.75E-04
1602	1000000	6	50000	6	10000	0.01462	0.0118	0.01008	0.00852	0.006	-0.000125	4.36E-04
1603	1000000	6	50000	6	20000	0.009619	0.007132	0.005775	0.00464	0.003017	-0.000112	3.13E-04
1604	1000000	6	50000	6	50000	0.005777	0.00367	0.0027	0.002	0.001161	-9.84E-05	1.78E-04
1605	1000000	6	50000	8	5000	0.021	0.01801	0.01609	0.01424	0.01098	-0.00013	5.07E-04
1606	1000000	6	50000	8	10000	0.01388	0.01119	0.009599	0.00817	0.00586	-0.000119	3.83E-04
1607	1000000	6	50000	8	20000	0.009296	0.006882	0.005589	0.00452	0.002981	-0.000109	2.73E-04
1608	1000000	6	50000	8	50000	0.005779	0.003673	0.002704	0.002	0.001164	-9.83E-05	1.53E-04
1609	1000000	6	50000	10	5000	0.01962	0.01681	0.01505	0.01338	0.01046	-0.000123	4.46E-04
1610	1000000	6	50000	10	10000	0.01317	0.01059	0.009098	0.00778	0.005662	-0.000114	3.37E-04
1611	1000000	6	50000	10	20000	0.009004	0.006647	0.005408	0.00439	0.002935	-0.000107	2.39E-04
1612	1000000	6	50000	10	50000	0.00578	0.003675	0.002707	0.002	0.001167	-9.82E-05	1.33E-04
1613	1000000	6	50000	12	5000	0.01838	0.01569	0.01407	0.01256	0.009935	-0.000117	3.93E-04
1614	1000000	6	50000	12	10000	0.01254	0.01005	0.008645	0.00742	0.00547	-0.000111	2.97E-04
1615	1000000	6	50000	12	20000	0.008743	0.006431	0.005236	0.00427	0.002883	-0.000105	2.10E-04
1616	1000000	6	50000	12	50000	0.005781	0.003677	0.002708	0.00201	0.00117	-9.81E-05	1.17E-04
1617	1000000	6	50000	14	5000	0.01726	0.01468	0.01316	0.01178	0.009405	-0.000113	3.48E-04
1618	1000000	6	50000	14	10000	0.01198	0.009556	0.008225	0.00708	0.005274	-0.000108	2.63E-04
1619	1000000	6	50000	14	20000	0.00851	0.006234	0.005075	0.00414	0.002827	-0.000103	1.86E-04
1620	1000000	6	50000	14	50000	0.005781	0.003677	0.00271	0.00201	0.001172	-9.81E-05	1.03E-04
1621	1000000	6	75000	6	5000	0.02136	0.01842	0.01649	0.01461	0.01124	-0.000124	5.37E-04
1622	1000000	6	75000	6	10000	0.01392	0.01129	0.009721	0.00829	0.005941	-0.000113	4.16E-04
1623	1000000	6	75000	6	20000	0.009127	0.006813	0.005572	0.00453	0.003005	-0.000102	3.08E-04
1624	1000000	6	75000	6	50000	0.0054	0.003447	0.002573	0.00194	0.00116	-8.87E-05	1.86E-04
1625	1000000	6	75000	8	5000	0.0196	0.0169	0.0152	0.01358	0.01066	-0.000113	4.62E-04
1626	1000000	6	75000	8	10000	0.01296	0.01051	0.009099	0.00783	0.005739	-0.000105	3.59E-04
1627	1000000	6	75000	8	20000	0.008669	0.006459	0.005311	0.00436	0.002953	-9.68E-05	2.65E-04
1628	1000000	6	75000	8	50000	0.005305	0.003381	0.002531	0.00191	0.00116	-8.73E-05	1.58E-04
1629	1000000	6	75000	10	5000	0.01802	0.0155	0.014	0.01257	0.01004	-0.000106	3.98E-04
1630	1000000	6	75000	10	10000	0.01212	0.0098	0.008514	0.00737	0.005512	-9.95E-05	3.09E-04
1631	1000000	6	75000	10	20000	0.008266	0.006136	0.005062	0.00418	0.002888	-9.35E-05	2.28E-04
1632	1000000	6	75000	10	50000	0.005221	0.00332	0.002489	0.00189	0.001157	-8.64E-05	1.36E-04
1633	1000000	6	75000	12	5000	0.01663	0.01426	0.01289	0.01163	0.009414	-9.99E-05	3.45E-04
1634	1000000	6	75000	12	10000	0.01138	0.009163	0.007977	0.00695	0.005274	-9.55E-05	2.68E-04
1635	1000000	6	75000	12	20000	0.007913	0.005845	0.00483	0.00401	0.002814	-9.1E-05	1.98E-04
1636	1000000	6	75000	12	50000	0.005148	0.003264	0.002448	0.00186	0.001151	-8.57E-05	1.18E-04
1637	1000000	6	75000	14	5000	0.01541	0.01314	0.01189	0.01076	0.008798	-9.57E-05	3.01E-04
1638	1000000	6	75000	14	10000	0.01074	0.008596	0.007489	0.00655	0.005033	-9.25E-05	2.35E-04
1639	1000000	6	75000	14	20000	0.007606	0.005585	0.004617	0.00385	0.002735	-8.92E-05	1.73E-04
1640	1000000	6	75000	14	50000	0.005084	0.003213	0.00241	0.00184	0.001143	-8.52E-05	1.03E-04
1641	1000000	6	100000	6	5000	0.02046	0.01772	0.01594	0.0142	0.01106	-0.000112	5.03E-04
1642	1000000	6	100000	6	10000	0.01335	0.01089	0.009439	0.00811	0.005892	-0.000102	3.95E-04
1643	1000000	6	100000	6	20000	0.008756	0.006577	0.005426	0.00445	0.003	-9.26E-05	2.98E-04
1644	1000000	6	100000	6	50000	0.005145	0.003306	0.002498	0.0019	0.001164	-8.11E-05	1.87E-04
1645	1000000	6	100000	8	5000	0.01852	0.01604	0.01452	0.01305	0.01039	-0.000101	4.25E-04
1646	1000000	6	100000	8	10000	0.01228	0.01001	0.008735	0.00758	0.005655	-9.38E-05	3.35E-04
1647	1000000	6	100000	8	20000	0.008209	0.006157	0.005115	0.00424	0.002936	-8.71E-05	2.53E-04
1648	1000000	6	100000	8	50000	0.004987	0.003196	0.002428	0.00187	0.001162	-7.9E-05	1.57E-04
1649	1000000	6	100000	10	5000	0.01683	0.01454	0.01321	0.01196	0.009699	-9.27E-05	3.61E-04
1650	1000000	6	100000	10	10000	0.01135	0.009226	0.008087	0.00708	0.005393	-8.8E-05	2.85E-04

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
1651	1000000	6	100000	10	20000	0.007739	0.005779	0.004823	0.00404	0.002855	-8.33E-05	2.16E-04
1652	1000000	6	100000	10	50000	0.004851	0.003097	0.002359	0.00183	0.001154	-7.75E-05	1.34E-04
1653	1000000	6	100000	12	5000	0.01537	0.01323	0.01204	0.01096	0.009007	-8.72E-05	3.09E-04
1654	1000000	6	100000	12	10000	0.01056	0.008538	0.007503	0.00661	0.005121	-8.39E-05	2.44E-04
1655	1000000	6	100000	12	20000	0.007335	0.005446	0.004557	0.00384	0.002766	-8.06E-05	1.85E-04
1656	1000000	6	100000	12	50000	0.004735	0.003008	0.002294	0.00178	0.001144	-7.65E-05	1.15E-04
1657	1000000	6	100000	14	5000	0.01411	0.01207	0.011	0.01003	0.008336	-8.32E-05	2.66E-04
1658	1000000	6	100000	14	10000	0.009874	0.007981	0.006981	0.00617	0.004851	-8.1E-05	2.11E-04
1659	1000000	6	100000	14	20000	0.006989	0.005153	0.004315	0.00365	0.002671	-7.87E-05	1.61E-04
1660	1000000	6	100000	14	50000	0.004634	0.002928	0.002234	0.00174	0.00113	-7.58E-05	1.00E-04
1661	1000000	6	125000	6	5000	0.01971	0.01713	0.01548	0.01386	0.0109	-0.000102	4.73E-04
1662	1000000	6	125000	6	10000	0.01288	0.01056	0.009203	0.00795	0.005848	-9.36E-05	3.76E-04
1663	1000000	6	125000	6	20000	0.008453	0.006388	0.005308	0.00439	0.002996	-8.51E-05	2.88E-04
1664	1000000	6	125000	6	50000	0.00495	0.003202	0.002446	0.00188	0.001169	-7.48E-05	1.85E-04
1665	1000000	6	125000	8	5000	0.01765	0.01535	0.01396	0.01262	0.01016	-9.04E-05	3.94E-04
1666	1000000	6	125000	8	10000	0.01173	0.00961	0.008441	0.00738	0.005581	-8.47E-05	3.14E-04
1667	1000000	6	125000	8	20000	0.007845	0.005919	0.004961	0.00416	0.002921	-7.91E-05	2.41E-04
1668	1000000	6	125000	8	50000	0.004747	0.003063	0.002356	0.00184	0.001165	-7.21E-05	1.55E-04
1669	1000000	6	125000	10	5000	0.0159	0.01379	0.0126	0.01147	0.009411	-8.25E-05	3.31E-04
1670	1000000	6	125000	10	10000	0.01075	0.00878	0.007752	0.00684	0.005291	-7.89E-05	2.64E-04
1671	1000000	6	125000	10	20000	0.007331	0.005507	0.004641	0.00393	0.002828	-7.51E-05	2.03E-04
1672	1000000	6	125000	10	50000	0.004576	0.002937	0.002269	0.00178	0.001154	-7.04E-05	1.31E-04
1673	1000000	6	125000	12	5000	0.01441	0.01244	0.01139	0.01042	0.008672	-7.73E-05	2.80E-04
1674	1000000	6	125000	12	10000	0.009923	0.008063	0.007141	0.00634	0.004995	-7.49E-05	2.25E-04
1675	1000000	6	125000	12	20000	0.006897	0.005148	0.004352	0.00371	0.002726	-7.24E-05	1.73E-04
1676	1000000	6	125000	12	50000	0.004431	0.002826	0.002188	0.00173	0.001139	-6.92E-05	1.12E-04
1677	1000000	6	125000	14	5000	0.01313	0.01126	0.01032	0.00947	0.007962	-7.36E-05	2.40E-04
1678	1000000	6	125000	14	10000	0.009223	0.007441	0.0066	0.00589	0.004702	-7.21E-05	1.93E-04
1679	1000000	6	125000	14	20000	0.006529	0.004834	0.004093	0.00351	0.002619	-7.05E-05	1.49E-04
1680	1000000	6	125000	14	50000	0.004307	0.002727	0.002113	0.00168	0.001121	-6.83E-05	9.64E-05
1681	1000000	6	150000	6	5000	0.01907	0.01663	0.01508	0.01356	0.01075	-9.37E-05	4.48E-04
1682	1000000	6	150000	6	10000	0.01248	0.01028	0.009	0.00782	0.005806	-8.62E-05	3.58E-04
1683	1000000	6	150000	6	20000	0.008197	0.006228	0.005209	0.00434	0.002992	-7.87E-05	2.77E-04
1684	1000000	6	150000	6	50000	0.004791	0.003121	0.002405	0.00187	0.001173	-6.94E-05	1.82E-04
1685	1000000	6	150000	8	5000	0.01694	0.01477	0.0135	0.01226	0.009962	-8.18E-05	3.69E-04
1686	1000000	6	150000	8	10000	0.01127	0.009277	0.008195	0.00721	0.005515	-7.71E-05	2.96E-04
1687	1000000	6	150000	8	20000	0.007544	0.005725	0.004835	0.00408	0.002907	-7.24E-05	2.30E-04
1688	1000000	6	150000	8	50000	0.004555	0.002958	0.002301	0.00181	0.001168	-6.64E-05	1.51E-04
1689	1000000	6	150000	10	5000	0.01515	0.01318	0.0121	0.01107	0.009164	-7.42E-05	3.07E-04
1690	1000000	6	150000	10	10000	0.01026	0.008418	0.00748	0.00664	0.005201	-7.13E-05	2.47E-04
1691	1000000	6	150000	10	20000	0.007001	0.005288	0.004494	0.00383	0.002804	-6.83E-05	1.93E-04
1692	1000000	6	150000	10	50000	0.004359	0.002814	0.0022	0.00175	0.001154	-6.44E-05	1.27E-04
1693	1000000	6	150000	12	5000	0.01364	0.01181	0.01086	0.00999	0.008388	-6.93E-05	2.58E-04
1694	1000000	6	150000	12	10000	0.009419	0.007684	0.006851	0.00612	0.004886	-6.75E-05	2.09E-04
1695	1000000	6	150000	12	20000	0.006548	0.004912	0.00419	0.0036	0.002691	-6.56E-05	1.63E-04
1696	1000000	6	150000	12	50000	0.004194	0.002688	0.002108	0.00169	0.001136	-6.31E-05	1.08E-04
1697	1000000	6	150000	14	5000	0.01235	0.01062	0.009778	0.00902	0.00765	-6.6E-05	2.20E-04
1698	1000000	6	150000	14	10000	0.00871	0.007053	0.006298	0.00566	0.004577	-6.5E-05	1.78E-04
1699	1000000	6	150000	14	20000	0.006167	0.004587	0.00392	0.00339	0.002575	-6.38E-05	1.40E-04
1700	1000000	6	150000	14	50000	0.004055	0.002576	0.002022	0.00163	0.001114	-6.22E-05	9.25E-05

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
1701	1000000	8	50000	6	5000	0.01746	0.01547	0.01419	0.01288	0.01038	-9.74E-05	3.71E-04
1702	1000000	8	50000	6	10000	0.01145	0.009641	0.008567	0.00753	0.005705	-8.79E-05	2.85E-04
1703	1000000	8	50000	6	20000	0.007576	0.005946	0.005069	0.00428	0.003007	-7.91E-05	2.08E-04
1704	1000000	8	50000	6	50000	0.004575	0.003147	0.002488	0.00196	0.001222	-6.92E-05	1.22E-04
1705	1000000	8	50000	8	5000	0.0166	0.0147	0.01349	0.01228	0.009981	-9.24E-05	3.37E-04
1706	1000000	8	50000	8	10000	0.01099	0.009246	0.008229	0.00726	0.005546	-8.45E-05	2.57E-04
1707	1000000	8	50000	8	20000	0.007378	0.00578	0.004933	0.00417	0.002958	-7.72E-05	1.85E-04
1708	1000000	8	50000	8	50000	0.004577	0.003149	0.002491	0.00196	0.001225	-6.92E-05	1.06E-04
1709	1000000	8	50000	10	5000	0.01575	0.01392	0.01279	0.01167	0.009546	-8.83E-05	3.06E-04
1710	1000000	8	50000	10	10000	0.01056	0.008859	0.007892	0.00698	0.005374	-8.18E-05	2.32E-04
1711	1000000	8	50000	10	20000	0.007193	0.00562	0.0048	0.00407	0.002904	-7.57E-05	1.66E-04
1712	1000000	8	50000	10	50000	0.004579	0.003151	0.002493	0.00196	0.001228	-6.91E-05	9.40E-05
1713	1000000	8	50000	12	5000	0.01493	0.01316	0.0121	0.01105	0.009092	-8.5E-05	2.77E-04
1714	1000000	8	50000	12	10000	0.01015	0.00849	0.007565	0.0067	0.005194	-7.96E-05	2.09E-04
1715	1000000	8	50000	12	20000	0.00702	0.005469	0.004671	0.00397	0.002847	-7.46E-05	1.49E-04
1716	1000000	8	50000	12	50000	0.004579	0.003152	0.002494	0.00196	0.00123	-6.91E-05	8.38E-05
1717	1000000	8	50000	14	5000	0.01416	0.01243	0.01143	0.01045	0.008633	-8.22E-05	2.51E-04
1718	1000000	8	50000	14	10000	0.009768	0.008141	0.007253	0.00643	0.005012	-7.78E-05	1.89E-04
1719	1000000	8	50000	14	20000	0.006861	0.005328	0.004549	0.00387	0.002789	-7.36E-05	1.34E-04
1720	1000000	8	50000	14	50000	0.00458	0.003153	0.002495	0.00196	0.001231	-6.91E-05	7.52E-05
1721	1000000	8	75000	6	5000	0.01683	0.01494	0.01374	0.01251	0.01017	-8.96E-05	3.54E-04
1722	1000000	8	75000	6	10000	0.01104	0.009317	0.008312	0.00734	0.00562	-8.11E-05	2.77E-04
1723	1000000	8	75000	6	20000	0.007288	0.005731	0.004911	0.00417	0.002969	-7.31E-05	2.08E-04
1724	1000000	8	75000	6	50000	0.004346	0.002986	0.002377	0.00189	0.001204	-6.38E-05	1.28E-04
1725	1000000	8	75000	8	5000	0.01576	0.01397	0.01288	0.01177	0.009671	-8.34E-05	3.16E-04
1726	1000000	8	75000	8	10000	0.01045	0.008809	0.007879	0.00699	0.005417	-7.67E-05	2.46E-04
1727	1000000	8	75000	8	20000	0.007	0.005491	0.004716	0.00402	0.002901	-7.03E-05	1.83E-04
1728	1000000	8	75000	8	50000	0.004284	0.002938	0.002342	0.00186	0.001198	-6.3E-05	1.11E-04
1729	1000000	8	75000	10	5000	0.01473	0.01303	0.01202	0.01103	0.009136	-7.85E-05	2.81E-04
1730	1000000	8	75000	10	10000	0.009906	0.008322	0.007456	0.00664	0.0052	-7.32E-05	2.18E-04
1731	1000000	8	75000	10	20000	0.006735	0.005264	0.004528	0.00388	0.002826	-6.82E-05	1.62E-04
1732	1000000	8	75000	10	50000	0.004229	0.002894	0.002308	0.00184	0.00119	-6.23E-05	9.76E-05
1733	1000000	8	75000	12	5000	0.01376	0.01213	0.0112	0.01029	0.008588	-7.47E-05	2.50E-04
1734	1000000	8	75000	12	10000	0.009402	0.007868	0.007053	0.0063	0.004975	-7.05E-05	1.94E-04
1735	1000000	8	75000	12	20000	0.006494	0.005054	0.004349	0.00373	0.002746	-6.65E-05	1.44E-04
1736	1000000	8	75000	12	50000	0.004179	0.002852	0.002275	0.00182	0.001181	-6.19E-05	8.62E-05
1737	1000000	8	75000	14	5000	0.01287	0.01129	0.01043	0.00959	0.008043	-7.18E-05	2.24E-04
1738	1000000	8	75000	14	10000	0.008942	0.007448	0.006676	0.00597	0.00475	-6.85E-05	1.74E-04
1739	1000000	8	75000	14	20000	0.006276	0.004861	0.004182	0.0036	0.002665	-6.53E-05	1.28E-04
1740	1000000	8	75000	14	50000	0.004133	0.002814	0.002244	0.00179	0.001171	-6.15E-05	7.67E-05
1741	1000000	8	100000	6	5000	0.01629	0.01448	0.01335	0.0122	0.009989	-8.29E-05	3.37E-04
1742	1000000	8	100000	6	10000	0.0107	0.009052	0.008104	0.00719	0.00555	-7.53E-05	2.67E-04
1743	1000000	8	100000	6	20000	0.007065	0.005568	0.004793	0.00409	0.002945	-6.8E-05	2.04E-04
1744	1000000	8	100000	6	50000	0.004189	0.002881	0.002309	0.00185	0.001197	-5.94E-05	1.30E-04
1745	1000000	8	100000	8	5000	0.01507	0.01338	0.01237	0.01136	0.009409	-7.59E-05	2.96E-04
1746	1000000	8	100000	8	10000	0.01002	0.008463	0.007602	0.00678	0.005314	-7.02E-05	2.34E-04
1747	1000000	8	100000	8	20000	0.006713	0.005276	0.004557	0.00391	0.002862	-6.46E-05	1.78E-04
1748	1000000	8	100000	8	50000	0.004085	0.002801	0.00225	0.00181	0.001186	-5.8E-05	1.12E-04
1749	1000000	8	100000	10	5000	0.01392	0.01233	0.01142	0.01052	0.0088	-7.07E-05	2.60E-04
1750	1000000	8	100000	10	10000	0.009402	0.007911	0.007122	0.00638	0.005063	-6.63E-05	2.05E-04

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
1751	1000000	8	100000	10	20000	0.006396	0.005006	0.004333	0.00374	0.002772	-6.21E-05	1.55E-04
1752	1000000	8	100000	10	50000	0.003993	0.002727	0.002193	0.00177	0.001172	-5.7E-05	9.77E-05
1753	1000000	8	100000	12	5000	0.01287	0.01135	0.01052	0.00971	0.008187	-6.68E-05	2.29E-04
1754	1000000	8	100000	12	10000	0.008841	0.007404	0.006673	0.006	0.004807	-6.35E-05	1.80E-04
1755	1000000	8	100000	12	20000	0.006113	0.004759	0.004123	0.00357	0.002677	-6.02E-05	1.37E-04
1756	1000000	8	100000	12	50000	0.00391	0.002659	0.002139	0.00173	0.001156	-5.63E-05	8.56E-05
1757	1000000	8	100000	14	5000	0.01191	0.01045	0.00968	0.00895	0.007585	-6.38E-05	2.02E-04
1758	1000000	8	100000	14	10000	0.008336	0.006943	0.006257	0.00563	0.004553	-6.13E-05	1.60E-04
1759	1000000	8	100000	14	20000	0.00586	0.004535	0.003929	0.00341	0.00258	-5.88E-05	1.21E-04
1760	1000000	8	100000	14	50000	0.003837	0.002597	0.002089	0.00169	0.001139	-5.58E-05	7.57E-05
1761	1000000	8	125000	6	5000	0.01582	0.01409	0.01302	0.01193	0.009825	-7.71E-05	3.22E-04
1762	1000000	8	125000	6	10000	0.01041	0.008824	0.007926	0.00706	0.005489	-7.03E-05	2.57E-04
1763	1000000	8	125000	6	20000	0.006878	0.005433	0.004696	0.00403	0.002926	-6.36E-05	1.99E-04
1764	1000000	8	125000	6	50000	0.004068	0.002803	0.002259	0.00182	0.001193	-5.56E-05	1.30E-04
1765	1000000	8	125000	8	5000	0.01449	0.01289	0.01195	0.011	0.009181	-6.97E-05	2.79E-04
1766	1000000	8	125000	8	10000	0.009665	0.008175	0.007372	0.00661	0.005225	-6.47E-05	2.22E-04
1767	1000000	8	125000	8	20000	0.006479	0.005103	0.00443	0.00383	0.002832	-5.98E-05	1.72E-04
1768	1000000	8	125000	8	50000	0.003932	0.002699	0.002183	0.00177	0.001179	-5.39E-05	1.12E-04
1769	1000000	8	125000	10	5000	0.01327	0.01176	0.01092	0.0101	0.008515	-6.43E-05	2.42E-04
1770	1000000	8	125000	10	10000	0.008993	0.007578	0.006851	0.00617	0.004948	-6.06E-05	1.93E-04
1771	1000000	8	125000	10	20000	0.006126	0.004801	0.004179	0.00363	0.002729	-5.7E-05	1.49E-04
1772	1000000	8	125000	10	50000	0.003813	0.002604	0.00211	0.00172	0.001161	-5.27E-05	9.63E-05
1773	1000000	8	125000	12	5000	0.01216	0.01073	0.00997	0.00924	0.007853	-6.04E-05	2.11E-04
1774	1000000	8	125000	12	10000	0.008395	0.007037	0.00637	0.00576	0.004668	-5.77E-05	1.68E-04
1775	1000000	8	125000	12	20000	0.005815	0.00453	0.003948	0.00344	0.002622	-5.51E-05	1.30E-04
1776	1000000	8	125000	12	50000	0.003709	0.002518	0.002042	0.00167	0.00114	-5.18E-05	8.39E-05
1777	1000000	8	125000	14	5000	0.01116	0.009784	0.009093	0.00844	0.007211	-5.75E-05	1.85E-04
1778	1000000	8	125000	14	10000	0.007864	0.00655	0.00593	0.00537	0.004393	-5.55E-05	1.48E-04
1779	1000000	8	125000	14	20000	0.00554	0.004286	0.003737	0.00327	0.002514	-5.36E-05	1.14E-04
1780	1000000	8	125000	14	50000	0.003618	0.002441	0.001979	0.00162	0.001118	-5.11E-05	7.37E-05
1781	1000000	8	150000	6	5000	0.01541	0.01374	0.01273	0.01169	0.009676	-7.2E-05	3.08E-04
1782	1000000	8	150000	6	10000	0.01016	0.008624	0.007768	0.00694	0.005434	-6.58E-05	2.48E-04
1783	1000000	8	150000	6	20000	0.006715	0.005316	0.004612	0.00397	0.002909	-5.97E-05	1.94E-04
1784	1000000	8	150000	6	50000	0.003967	0.002739	0.00222	0.0018	0.001191	-5.23E-05	1.29E-04
1785	1000000	8	150000	8	5000	0.014	0.01246	0.01158	0.0107	0.008978	-6.43E-05	2.64E-04
1786	1000000	8	150000	8	10000	0.009359	0.007929	0.007175	0.00645	0.005147	-5.99E-05	2.12E-04
1787	1000000	8	150000	8	20000	0.006281	0.004956	0.004322	0.00375	0.002805	-5.56E-05	1.65E-04
1788	1000000	8	150000	8	50000	0.003808	0.002617	0.002131	0.00174	0.001174	-5.03E-05	1.10E-04
1789	1000000	8	150000	10	5000	0.01271	0.01128	0.01051	0.00974	0.008266	-5.89E-05	2.27E-04
1790	1000000	8	150000	10	10000	0.008651	0.007299	0.006624	0.00599	0.004848	-5.58E-05	1.83E-04
1791	1000000	8	150000	10	20000	0.005901	0.004632	0.004052	0.00354	0.002692	-5.27E-05	1.42E-04
1792	1000000	8	150000	10	50000	0.003669	0.002507	0.002046	0.00168	0.001152	-4.89E-05	9.43E-05
1793	1000000	8	150000	12	5000	0.01157	0.01021	0.009515	0.00885	0.007567	-5.51E-05	1.97E-04
1794	1000000	8	150000	12	10000	0.008029	0.006736	0.006122	0.00556	0.004549	-5.29E-05	1.58E-04
1795	1000000	8	150000	12	20000	0.005571	0.004343	0.003806	0.00334	0.002576	-5.07E-05	1.23E-04
1796	1000000	8	150000	12	50000	0.003549	0.002408	0.001967	0.00162	0.001128	-4.79E-05	8.17E-05
1797	1000000	8	150000	14	5000	0.01055	0.009244	0.008613	0.00802	0.006897	-5.23E-05	1.71E-04
1798	1000000	8	150000	14	10000	0.00748	0.006231	0.005665	0.00516	0.004257	-5.08E-05	1.38E-04
1799	1000000	8	150000	14	20000	0.005282	0.004087	0.003583	0.00316	0.00246	-4.92E-05	1.08E-04
1800	1000000	8	150000	14	50000	0.003444	0.002319	0.001895	0.00157	0.001102	-4.72E-05	7.15E-05

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
1801	1000000	10	50000	6	5000	0.01411	0.01269	0.01184	0.01096	0.009202	-7.1E-05	2.59E-04
1802	1000000	10	50000	6	10000	0.009353	0.008035	0.007316	0.0066	0.005266	-6.41E-05	2.01E-04
1803	1000000	10	50000	6	20000	0.006246	0.005029	0.004427	0.00386	0.002885	-5.77E-05	1.49E-04
1804	1000000	10	50000	6	50000	0.003812	0.002714	0.002246	0.00184	0.001236	-5.05E-05	8.88E-05
1805	1000000	10	50000	8	5000	0.01355	0.01217	0.01136	0.01053	0.008876	-6.81E-05	2.40E-04
1806	1000000	10	50000	8	10000	0.009058	0.007768	0.007078	0.0064	0.005126	-6.21E-05	1.84E-04
1807	1000000	10	50000	8	20000	0.006114	0.004913	0.004327	0.00378	0.002837	-5.66E-05	1.34E-04
1808	1000000	10	50000	8	50000	0.003814	0.002716	0.002248	0.00185	0.001238	-5.05E-05	7.85E-05
1809	1000000	10	50000	10	5000	0.01298	0.01163	0.01086	0.01008	0.008521	-6.56E-05	2.22E-04
1810	1000000	10	50000	10	10000	0.008766	0.007499	0.006836	0.00618	0.004977	-6.04E-05	1.69E-04
1811	1000000	10	50000	10	20000	0.005988	0.0048	0.004228	0.0037	0.002786	-5.56E-05	1.22E-04
1812	1000000	10	50000	10	50000	0.003815	0.002717	0.002249	0.00185	0.00124	-5.04E-05	7.02E-05
1813	1000000	10	50000	12	5000	0.01241	0.01109	0.01035	0.00961	0.008147	-6.34E-05	2.05E-04
1814	1000000	10	50000	12	10000	0.008481	0.007235	0.006594	0.00597	0.004821	-5.89E-05	1.55E-04
1815	1000000	10	50000	12	20000	0.005867	0.00469	0.004131	0.00361	0.002732	-5.49E-05	1.11E-04
1816	1000000	10	50000	12	50000	0.003816	0.002718	0.00225	0.00185	0.001242	-5.04E-05	6.32E-05
1817	1000000	10	50000	14	5000	0.01184	0.01055	0.009848	0.00914	0.007763	-6.16E-05	1.89E-04
1818	1000000	10	50000	14	10000	0.008207	0.006979	0.006358	0.00576	0.004662	-5.77E-05	1.42E-04
1819	1000000	10	50000	14	20000	0.005753	0.004586	0.004038	0.00353	0.002678	-5.42E-05	1.02E-04
1820	1000000	10	50000	14	50000	0.003816	0.002719	0.002251	0.00185	0.001243	-5.04E-05	5.74E-05
1821	1000000	10	75000	6	5000	0.0137	0.01233	0.01152	0.01069	0.009016	-6.64E-05	2.50E-04
1822	1000000	10	75000	6	10000	0.009093	0.007816	0.007133	0.00645	0.005181	-6.01E-05	1.97E-04
1823	1000000	10	75000	6	20000	0.00606	0.004879	0.004307	0.00377	0.002841	-5.41E-05	1.50E-04
1824	1000000	10	75000	6	50000	0.003659	0.002595	0.002155	0.00178	0.00121	-4.71E-05	9.43E-05
1825	1000000	10	75000	8	5000	0.01299	0.01167	0.01092	0.01014	0.008602	-6.26E-05	2.29E-04
1826	1000000	10	75000	8	10000	0.008706	0.007466	0.006822	0.00619	0.005001	-5.73E-05	1.79E-04
1827	1000000	10	75000	8	20000	0.005866	0.004709	0.004163	0.00365	0.002773	-5.23E-05	1.34E-04
1828	1000000	10	75000	8	50000	0.003616	0.00256	0.002127	0.00176	0.001201	-4.66E-05	8.30E-05
1829	1000000	10	75000	10	5000	0.01228	0.01099	0.01029	0.00958	0.008156	-5.95E-05	2.08E-04
1830	1000000	10	75000	10	10000	0.008328	0.00712	0.00651	0.00592	0.00481	-5.5E-05	1.62E-04
1831	1000000	10	75000	10	20000	0.005681	0.004545	0.00402	0.00353	0.0027	-5.09E-05	1.21E-04
1832	1000000	10	75000	10	50000	0.003577	0.002527	0.0021	0.00174	0.001191	-4.62E-05	7.36E-05
1833	1000000	10	75000	12	5000	0.01157	0.01033	0.009668	0.009	0.007694	-5.69E-05	1.89E-04
1834	1000000	10	75000	12	10000	0.007967	0.006785	0.006205	0.00564	0.004612	-5.32E-05	1.47E-04
1835	1000000	10	75000	12	20000	0.005509	0.004389	0.003882	0.00342	0.002625	-4.98E-05	1.09E-04
1836	1000000	10	75000	12	50000	0.003541	0.002495	0.002074	0.00172	0.001181	-4.58E-05	6.59E-05
1837	1000000	10	75000	14	5000	0.0109	0.009685	0.00906	0.00844	0.007229	-5.48E-05	1.72E-04
1838	1000000	10	75000	14	10000	0.007625	0.006466	0.00591	0.00538	0.004412	-5.17E-05	1.33E-04
1839	1000000	10	75000	14	20000	0.005348	0.004243	0.003751	0.00331	0.002549	-4.89E-05	9.86E-05
1840	1000000	10	75000	14	50000	0.003507	0.002466	0.002049	0.0017	0.00117	-4.56E-05	5.93E-05
1841	1000000	10	100000	6	5000	0.01335	0.01201	0.01125	0.01045	0.008851	-6.23E-05	2.41E-04
1842	1000000	10	100000	6	10000	0.008875	0.007632	0.00698	0.00633	0.00511	-5.65E-05	1.92E-04
1843	1000000	10	100000	6	20000	0.005914	0.004763	0.004216	0.0037	0.00281	-5.1E-05	1.48E-04
1844	1000000	10	100000	6	50000	0.003554	0.002517	0.002098	0.00174	0.001196	-4.43E-05	9.63E-05
1845	1000000	10	100000	8	5000	0.01252	0.01124	0.01054	0.00981	0.008366	-5.8E-05	2.17E-04
1846	1000000	10	100000	8	10000	0.008417	0.00722	0.006614	0.00602	0.0049	-5.32E-05	1.72E-04
1847	1000000	10	100000	8	20000	0.005674	0.004554	0.004039	0.00356	0.002728	-4.87E-05	1.32E-04
1848	1000000	10	100000	8	50000	0.003481	0.002457	0.002051	0.00171	0.001181	-4.34E-05	8.43E-05
1849	1000000	10	100000	10	5000	0.0117	0.01047	0.009822	0.00916	0.00785	-5.45E-05	1.95E-04
1850	1000000	10	100000	10	10000	0.00798	0.00682	0.00625	0.0057	0.00468	-5.06E-05	1.54E-04

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
1851	1000000	10	100000	10	20000	0.005449	0.00436	0.00387	0.00342	0.00264	-4.7E-05	1.17E-04
1852	1000000	10	100000	10	50000	0.00341	0.0024	0.00201	0.00167	0.00117	-4.27E-05	7.44E-05
1853	1000000	10	100000	12	5000	0.0109	0.00972	0.00912	0.00851	0.00733	-5.17E-05	1.76E-04
1854	1000000	10	100000	12	10000	0.00757	0.00644	0.0059	0.00539	0.00445	-4.86E-05	1.38E-04
1855	1000000	10	100000	12	20000	0.00524	0.00417	0.0037	0.00328	0.00255	-4.57E-05	1.05E-04
1856	1000000	10	100000	12	50000	0.00335	0.00235	0.00196	0.00164	0.00115	-4.22E-05	6.61E-05
1857	1000000	10	100000	14	5000	0.0102	0.00901	0.00845	0.00789	0.0068	-4.95E-05	1.58E-04
1858	1000000	10	100000	14	10000	0.00718	0.00608	0.00557	0.00509	0.00422	-4.7E-05	1.25E-04
1859	1000000	10	100000	14	20000	0.00505	0.004	0.00355	0.00314	0.00246	-4.46E-05	9.42E-05
1860	1000000	10	100000	14	50000	0.0033	0.0023	0.00192	0.0016	0.00113	-4.18E-05	5.92E-05
1861	1000000	10	125000	6	5000	0.013	0.0117	0.011	0.0102	0.0087	-5.87E-05	2.33E-04
1862	1000000	10	125000	6	10000	0.008682	0.00747	0.00685	0.00622	0.00505	-5.33E-05	1.86E-04
1863	1000000	10	125000	6	20000	0.00579	0.00467	0.00414	0.00365	0.00279	-4.82E-05	1.45E-04
1864	1000000	10	125000	6	50000	0.00347	0.00246	0.00206	0.00171	0.00119	-4.19E-05	9.68E-05
1865	1000000	10	125000	8	5000	0.0121	0.0109	0.0102	0.00953	0.00816	-5.39E-05	2.07E-04
1866	1000000	10	125000	8	10000	0.00817	0.00701	0.00644	0.00587	0.00481	-4.96E-05	1.65E-04
1867	1000000	10	125000	8	20000	0.00551	0.00443	0.00394	0.00348	0.00269	-4.56E-05	1.28E-04
1868	1000000	10	125000	8	50000	0.00338	0.00238	0.00199	0.00167	0.00117	-4.07E-05	8.42E-05
1869	1000000	10	125000	10	5000	0.0112	0.01	0.00942	0.00881	0.00759	-5.02E-05	1.84E-04
1870	1000000	10	125000	10	10000	0.00769	0.00657	0.00604	0.00552	0.00456	-4.68E-05	1.47E-04
1871	1000000	10	125000	10	20000	0.00526	0.0042	0.00374	0.00332	0.00259	-4.36E-05	1.13E-04
1872	1000000	10	125000	10	50000	0.00329	0.002306	0.001935	0.00162	0.001147	-3.98E-05	7.39E-05
1873	1000000	10	125000	12	5000	0.01036	0.009222	0.008664	0.00811	0.007012	-4.73E-05	1.64E-04
1874	1000000	10	125000	12	10000	0.007237	0.00615	0.005655	0.00518	0.00431	-4.47E-05	1.31E-04
1875	1000000	10	125000	12	20000	0.005028	0.003992	0.003558	0.00317	0.00249	-4.22E-05	1.01E-04
1876	1000000	10	125000	12	50000	0.003212	0.00224	0.001879	0.00158	0.001124	-3.92E-05	6.54E-05
1877	1000000	10	125000	14	5000	0.009571	0.008467	0.007948	0.00744	0.006452	-4.51E-05	1.47E-04
1878	1000000	10	125000	14	10000	0.006822	0.005762	0.005297	0.00486	0.004061	-4.3E-05	1.17E-04
1879	1000000	10	125000	14	20000	0.004818	0.0038	0.003386	0.00302	0.002388	-4.11E-05	8.98E-05
1880	1000000	10	125000	14	50000	0.003142	0.002178	0.001826	0.00154	0.001101	-3.87E-05	5.82E-05
1881	1000000	10	150000	6	5000	0.01274	0.01147	0.01077	0.01004	0.008562	-5.55E-05	2.25E-04
1882	1000000	10	150000	6	10000	0.00851	0.007326	0.006725	0.00613	0.004992	-5.04E-05	1.81E-04
1883	1000000	10	150000	6	20000	0.00568	0.004579	0.004074	0.0036	0.002763	-4.56E-05	1.42E-04
1884	1000000	10	150000	6	50000	0.003404	0.002409	0.002022	0.00169	0.001181	-3.98E-05	9.64E-05
1885	1000000	10	150000	8	5000	0.01174	0.01054	0.009916	0.00927	0.007967	-5.04E-05	1.98E-04
1886	1000000	10	150000	8	10000	0.007953	0.006825	0.00628	0.00574	0.004732	-4.65E-05	1.59E-04
1887	1000000	10	150000	8	20000	0.005376	0.004316	0.00385	0.00342	0.00266	-4.28E-05	1.24E-04
1888	1000000	10	150000	8	50000	0.00329	0.002316	0.001949	0.00164	0.001158	-3.83E-05	8.35E-05
1889	1000000	10	150000	10	5000	0.01079	0.009645	0.009076	0.0085	0.007352	-4.65E-05	1.75E-04
1890	1000000	10	150000	10	10000	0.007435	0.00635	0.005851	0.00537	0.004462	-4.36E-05	1.40E-04
1891	1000000	10	150000	10	20000	0.005099	0.004071	0.003638	0.00324	0.00255	-4.07E-05	1.09E-04
1892	1000000	10	150000	10	50000	0.003188	0.00223	0.001879	0.00159	0.001133	-3.73E-05	7.29E-05
1893	1000000	10	150000	12	5000	0.01033	0.009225	0.0087	0.00818	0.007134	-4.39E-05	1.54E-04
1894	1000000	10	150000	12	10000	0.006959	0.005908	0.005446	0.00501	0.004192	-4.14E-05	1.24E-04
1895	1000000	10	150000	12	20000	0.00485	0.003846	0.003439	0.00307	0.002439	-3.92E-05	9.64E-05
1896	1000000	10	150000	12	50000	0.003097	0.002153	0.001814	0.00153	0.001107	-3.66E-05	6.41E-05
1897	1000000	10	150000	14	5000	0.009074	0.008012	0.007532	0.00706	0.006153	-4.14E-05	1.37E-04
1898	1000000	10	150000	14	10000	0.006524	0.005501	0.005069	0.00467	0.003925	-3.97E-05	1.10E-04
1899	1000000	10	150000	14	20000	0.004625	0.003641	0.003255	0.00291	0.002329	-3.8E-05	8.57E-05
1900	1000000	10	150000	14	50000	0.003016	0.002082	0.001754	0.00149	0.001079	-0.000036	5.68E-05

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
1901	1000000	12	50000	6	5000	0.01168	0.01055	0.009956	0.00933	0.008043	-5.38E-05	1.91E-04
1902	1000000	12	50000	6	10000	0.007876	0.006815	0.006304	0.00579	0.004787	-4.84E-05	1.50E-04
1903	1000000	12	50000	6	20000	0.005318	0.004321	0.003885	0.00347	0.002711	-4.36E-05	1.12E-04
1904	1000000	12	50000	6	50000	0.003289	0.002367	0.002019	0.00171	0.001213	-3.81E-05	6.79E-05
1905	1000000	12	50000	8	5000	0.01129	0.01018	0.009607	0.00901	0.00778	-5.19E-05	1.80E-04
1906	1000000	12	50000	8	10000	0.007669	0.006623	0.006128	0.00563	0.004668	-4.71E-05	1.39E-04
1907	1000000	12	50000	8	20000	0.005225	0.004236	0.00381	0.0034	0.002668	-4.28E-05	1.02E-04
1908	1000000	12	50000	8	50000	0.00329	0.002369	0.00202	0.00171	0.001215	-3.8E-05	6.06E-05
1909	1000000	12	50000	10	5000	0.01087	0.009784	0.009234	0.00866	0.007491	-5.03E-05	1.69E-04
1910	1000000	12	50000	10	10000	0.007459	0.006426	0.005946	0.00547	0.004542	-4.6E-05	1.29E-04
1911	1000000	12	50000	10	20000	0.005133	0.004152	0.003734	0.00334	0.002622	-4.22E-05	9.36E-05
1912	1000000	12	50000	10	50000	0.003291	0.00237	0.002022	0.00171	0.001217	-3.8E-05	5.46E-05
1913	1000000	12	50000	12	5000	0.01045	0.009378	0.008848	0.0083	0.007186	-4.88E-05	1.58E-04
1914	1000000	12	50000	12	10000	0.007249	0.006228	0.005761	0.0053	0.004409	-0.000045	1.20E-04
1915	1000000	12	50000	12	20000	0.005044	0.00407	0.003659	0.00327	0.002574	-4.16E-05	8.61E-05
1916	1000000	12	50000	12	50000	0.003292	0.002371	0.002023	0.00172	0.001218	-3.8E-05	4.96E-05
1917	1000000	12	50000	14	5000	0.01003	0.008969	0.008457	0.00793	0.00687	-4.75E-05	1.47E-04
1918	1000000	12	50000	14	10000	0.007043	0.006032	0.005577	0.00513	0.004273	-4.42E-05	1.11E-04
1919	1000000	12	50000	14	20000	0.004959	0.00399	0.003586	0.00321	0.002526	-4.12E-05	7.95E-05
1920	1000000	12	50000	14	50000	0.003292	0.002371	0.002023	0.00172	0.001219	-3.8E-05	4.53E-05
1921	1000000	12	75000	6	5000	0.01139	0.01029	0.009718	0.00912	0.007882	-5.08E-05	1.87E-04
1922	1000000	12	75000	6	10000	0.007697	0.006658	0.006167	0.00567	0.004709	-4.58E-05	1.48E-04
1923	1000000	12	75000	6	20000	0.005189	0.004212	0.003794	0.00339	0.002668	-4.12E-05	1.13E-04
1924	1000000	12	75000	6	50000	0.003179	0.002278	0.001946	0.00166	0.001184	-3.58E-05	7.23E-05
1925	1000000	12	75000	8	5000	0.01088	0.009806	0.009267	0.0087	0.007543	-4.83E-05	1.73E-04
1926	1000000	12	75000	8	10000	0.007422	0.006403	0.005934	0.00547	0.004555	-4.4E-05	1.36E-04
1927	1000000	12	75000	8	20000	0.00505	0.004087	0.003683	0.0033	0.002606	-4E-05	1.03E-04
1928	1000000	12	75000	8	50000	0.003148	0.002251	0.001924	0.00164	0.001175	-3.54E-05	6.43E-05
1929	1000000	12	75000	10	5000	0.01036	0.009304	0.008792	0.00826	0.007176	-4.62E-05	1.60E-04
1930	1000000	12	75000	10	10000	0.007145	0.006145	0.005696	0.00525	0.004391	-4.24E-05	1.25E-04
1931	1000000	12	75000	10	20000	0.004916	0.003964	0.003573	0.0032	0.00254	-3.9E-05	9.35E-05
1932	1000000	12	75000	10	50000	0.003119	0.002225	0.001902	0.00162	0.001165	-3.51E-05	5.77E-05
1933	1000000	12	75000	12	5000	0.009827	0.008796	0.008308	0.00781	0.006792	-4.44E-05	1.48E-04
1934	1000000	12	75000	12	10000	0.006874	0.005889	0.005457	0.00503	0.00422	-4.12E-05	1.15E-04
1935	1000000	12	75000	12	20000	0.004787	0.003845	0.003465	0.00311	0.002472	-3.82E-05	8.53E-05
1936	1000000	12	75000	12	50000	0.003092	0.002201	0.00188	0.0016	0.001155	-3.49E-05	5.21E-05
1937	1000000	12	75000	14	5000	0.009306	0.008293	0.007827	0.00735	0.006402	-4.29E-05	1.36E-04
1938	1000000	12	75000	14	10000	0.006611	0.005639	0.005222	0.00482	0.004046	-4.01E-05	1.06E-04
1939	1000000	12	75000	14	20000	0.004664	0.00373	0.00336	0.00302	0.002404	-3.75E-05	7.82E-05
1940	1000000	12	75000	14	50000	0.003066	0.002178	0.00186	0.00159	0.001144	-3.47E-05	4.74E-05
1941	1000000	12	100000	6	5000	0.01114	0.01005	0.009506	0.00893	0.007736	-4.82E-05	1.81E-04
1942	1000000	12	100000	6	10000	0.007544	0.006523	0.00605	0.00557	0.004644	-4.35E-05	1.45E-04
1943	1000000	12	100000	6	20000	0.005087	0.004126	0.003723	0.00334	0.002637	-3.91E-05	1.12E-04
1944	1000000	12	100000	6	50000	0.003105	0.002218	0.001899	0.00162	0.001168	-3.39E-05	7.41E-05
1945	1000000	12	100000	8	5000	0.01053	0.009484	0.008971	0.00844	0.007335	-4.52E-05	1.66E-04
1946	1000000	12	100000	8	10000	0.007214	0.00622	0.005773	0.00533	0.004462	-4.12E-05	1.32E-04
1947	1000000	12	100000	8	20000	0.004914	0.003971	0.003586	0.00322	0.002561	-3.76E-05	1.01E-04
1948	1000000	12	100000	8	50000	0.003051	0.002172	0.001861	0.00159	0.001152	-3.33E-05	6.57E-05
1949	1000000	12	100000	10	5000	0.00992	0.008898	0.008417	0.00792	0.006905	-4.28E-05	1.52E-04
1950	1000000	12	100000	10	10000	0.006889	0.005915	0.005492	0.00507	0.004268	-3.94E-05	1.20E-04

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
1951	1000000	12	100000	10	20000	0.004748	0.00382	0.003451	0.00311	0.002481	-3.63E-05	9.15E-05
1952	1000000	12	100000	10	50000	0.003001	0.002128	0.001824	0.00156	0.001136	-3.28E-05	5.86E-05
1953	1000000	12	100000	12	5000	0.009314	0.008316	0.007863	0.0074	0.006464	-4.08E-05	1.39E-04
1954	1000000	12	100000	12	10000	0.006573	0.005617	0.005214	0.00482	0.004068	-3.8E-05	1.09E-04
1955	1000000	12	100000	12	20000	0.004591	0.003675	0.00332	0.00299	0.002399	-3.54E-05	8.30E-05
1956	1000000	12	100000	12	50000	0.002955	0.002087	0.001788	0.00153	0.001118	-3.24E-05	5.27E-05
1957	1000000	12	100000	14	5000	0.008728	0.007751	0.007322	0.00689	0.006023	-3.91E-05	1.26E-04
1958	1000000	12	100000	14	10000	0.00627	0.00533	0.004944	0.00457	0.003867	-3.68E-05	9.97E-05
1959	1000000	12	100000	14	20000	0.004443	0.003538	0.003194	0.00288	0.002316	-3.46E-05	7.55E-05
1960	1000000	12	100000	14	50000	0.002912	0.002049	0.001754	0.0015	0.0011	-3.21E-05	4.76E-05
1961	1000000	12	125000	6	5000	0.0109	0.00984	0.009311	0.00876	0.007603	-4.57E-05	1.76E-04
1962	1000000	12	125000	6	10000	0.007406	0.006403	0.005946	0.00549	0.004586	-4.13E-05	1.41E-04
1963	1000000	12	125000	6	20000	0.004999	0.004053	0.003663	0.00329	0.002611	-3.72E-05	1.11E-04
1964	1000000	12	125000	6	50000	0.003046	0.002172	0.001864	0.0016	0.001157	-3.23E-05	7.47E-05
1965	1000000	12	125000	8	5000	0.01022	0.009197	0.008707	0.0082	0.007148	-4.25E-05	1.60E-04
1966	1000000	12	125000	8	10000	0.007033	0.006059	0.005632	0.00521	0.004379	-3.88E-05	1.28E-04
1967	1000000	12	125000	8	20000	0.004799	0.003874	0.003506	0.00316	0.002524	-3.54E-05	9.92E-05
1968	1000000	12	125000	8	50000	0.002975	0.002112	0.001814	0.00156	0.001137	-3.14E-05	6.59E-05
1969	1000000	12	125000	10	5000	0.009541	0.008546	0.008091	0.00762	0.006668	-3.98E-05	1.45E-04
1970	1000000	12	125000	10	10000	0.006669	0.005719	0.005318	0.00492	0.004161	-3.68E-05	1.15E-04
1971	1000000	12	125000	10	20000	0.004609	0.003701	0.003351	0.00302	0.002432	-3.4E-05	8.90E-05
1972	1000000	12	125000	10	50000	0.00291	0.002055	0.001766	0.00152	0.001115	-3.08E-05	5.86E-05
1973	1000000	12	125000	12	5000	0.008878	0.00791	0.007485	0.00705	0.006182	-3.77E-05	1.31E-04
1974	1000000	12	125000	12	10000	0.006319	0.005389	0.00501	0.00464	0.003938	-3.52E-05	1.04E-04
1975	1000000	12	125000	12	20000	0.004431	0.003537	0.003202	0.00289	0.002339	-3.29E-05	8.02E-05
1976	1000000	12	125000	12	50000	0.00285	0.002001	0.00172	0.00148	0.001092	-3.03E-05	5.24E-05
1977	1000000	12	125000	14	5000	0.008247	0.007301	0.006902	0.0065	0.005705	-3.6E-05	1.18E-04
1978	1000000	12	125000	14	10000	0.005988	0.005074	0.004714	0.00437	0.003717	-3.4E-05	9.44E-05
1979	1000000	12	125000	14	20000	0.004265	0.003383	0.003061	0.00277	0.002246	-3.21E-05	7.25E-05
1980	1000000	12	125000	14	50000	0.0028	0.00195	0.00168	0.00144	0.00107	-2.99E-05	4.71E-05
1981	1000000	12	150000	6	5000	0.0107	0.00964	0.00913	0.00859	0.00748	-4.35E-05	1.71E-04
1982	1000000	12	150000	6	10000	0.00728	0.00629	0.00585	0.00541	0.00453	-3.94E-05	1.38E-04
1983	1000000	12	150000	6	20000	0.00492	0.00399	0.00361	0.00325	0.00259	-3.55E-05	1.09E-04
1984	1000000	12	150000	6	50000	0.003	0.00213	0.00184	0.00158	0.00115	-3.08E-05	7.46E-05
1985	1000000	12	150000	8	5000	0.00994	0.00894	0.00847	0.00798	0.00698	-0.00004	1.54E-04
1986	1000000	12	150000	8	10000	0.00687	0.00592	0.00551	0.0051	0.0043	-3.66E-05	1.24E-04
1987	1000000	12	150000	8	20000	0.0047	0.00379	0.00344	0.0031	0.00249	-3.35E-05	9.69E-05
1988	1000000	12	150000	8	50000	0.00291	0.00206	0.00178	0.00153	0.00113	-2.97E-05	6.56E-05
1989	1000000	12	150000	10	5000	0.00921	0.00824	0.0078	0.00736	0.00646	-3.72E-05	1.38E-04
1990	1000000	12	150000	10	10000	0.00648	0.00555	0.00517	0.00479	0.00407	-3.45E-05	1.11E-04
1991	1000000	12	150000	10	20000	0.00449	0.0036	0.00327	0.00295	0.00239	-0.000032	8.64E-05
1992	1000000	12	150000	10	50000	0.00284	0.002	0.00172	0.00148	0.0011	-0.000029	5.80E-05
1993	1000000	12	150000	12	5000	0.0085	0.00756	0.00716	0.00675	0.00594	-0.000035	1.24E-04
1994	1000000	12	150000	12	10000	0.0061	0.00519	0.00483	0.00449	0.00383	-3.29E-05	9.94E-05
1995	1000000	12	150000	12	20000	0.0043	0.00342	0.0031	0.00281	0.00229	-3.08E-05	7.74E-05
1996	1000000	12	150000	12	50000	0.00276	0.00193	0.00167	0.00144	0.00107	-2.84E-05	5.17E-05
1997	1000000	12	150000	14	5000	0.00784	0.00692	0.00655	0.00617	0.00543	-3.33E-05	1.11E-04
1998	1000000	12	150000	14	10000	0.00575	0.00486	0.00452	0.0042	0.00359	-3.15E-05	8.96E-05
1999	1000000	12	150000	14	20000	0.004115	0.003253	0.00295	0.00268	0.002187	-2.99E-05	6.97E-05
2000	1000000	12	150000	14	50000	0.0027	0.001875	0.001614	0.0014	0.001046	-2.8E-05	4.63E-05

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
2001	1000000	14	50000	6	5000	0.00979	0.00883	0.00839	0.00793	0.00695	-0.000042	1.47E-04
2002	1000000	14	50000	6	10000	0.00677	0.00585	0.00547	0.00508	0.00431	-3.77E-05	1.16E-04
2003	1000000	14	50000	6	20000	0.00464	0.00377	0.00343	0.00312	0.00252	-3.39E-05	8.71E-05
2004	1000000	14	50000	6	50000	0.00291	0.00209	0.00182	0.00158	0.00117	-2.95E-05	5.37E-05
2005	1000000	14	50000	8	5000	0.0095	0.00855	0.00813	0.00768	0.00674	-4.07E-05	1.40E-04
2006	1000000	14	50000	8	10000	0.00661	0.00571	0.00534	0.00496	0.00421	-3.68E-05	1.09E-04
2007	1000000	14	50000	8	20000	0.00457	0.0037	0.00338	0.00306	0.00248	-3.33E-05	8.03E-05
2008	1000000	14	50000	8	50000	0.00291	0.00209	0.00182	0.00158	0.00117	-2.95E-05	4.83E-05
2009	1000000	14	50000	10	5000	0.00919	0.00826	0.00784	0.00741	0.00651	-3.96E-05	1.32E-04
2010	1000000	14	50000	10	10000	0.00645	0.00556	0.00519	0.00483	0.0041	-0.000036	1.02E-04
2011	1000000	14	50000	10	20000	0.0045	0.00364	0.00332	0.00301	0.00244	-3.29E-05	7.42E-05
2012	1000000	14	50000	10	50000	0.00291	0.00209	0.00182	0.00158	0.00117	-2.95E-05	4.38E-05
2013	1000000	14	50000	12	5000	0.00887	0.00795	0.00754	0.00713	0.00626	-3.86E-05	1.25E-04
2014	1000000	14	50000	12	10000	0.00629	0.0054	0.00505	0.00469	0.00399	-3.53E-05	9.52E-05
2015	1000000	14	50000	12	20000	0.00443	0.00357	0.00326	0.00296	0.0024	-3.25E-05	6.89E-05
2016	1000000	14	50000	12	50000	0.00291	0.00209	0.00182	0.00158	0.00117	-2.95E-05	4.00E-05
2017	1000000	14	50000	14	5000	0.00855	0.00763	0.00724	0.00684	0.006	-3.76E-05	1.17E-04
2018	1000000	14	50000	14	10000	0.00613	0.00525	0.0049	0.00455	0.00388	-3.47E-05	8.93E-05
2019	1000000	14	50000	14	20000	0.00436	0.00351	0.0032	0.0029	0.00236	-3.22E-05	6.41E-05
2020	1000000	14	50000	14	50000	0.00291	0.00209	0.00182	0.00158	0.00117	-2.95E-05	3.68E-05
2021	1000000	14	75000	6	5000	0.00958	0.00863	0.00821	0.00776	0.00682	-0.00004	1.44E-04
2022	1000000	14	75000	6	10000	0.00664	0.00573	0.00536	0.00499	0.00424	-3.59E-05	1.15E-04
2023	1000000	14	75000	6	20000	0.00454	0.00368	0.00336	0.00306	0.00248	-3.22E-05	8.85E-05
2024	1000000	14	75000	6	50000	0.00283	0.00202	0.00176	0.00153	0.00114	-2.79E-05	5.72E-05
2025	1000000	14	75000	8	5000	0.0092	0.00827	0.00786	0.00743	0.00654	-3.83E-05	1.35E-04
2026	1000000	14	75000	8	10000	0.00643	0.00554	0.00518	0.00482	0.00411	-3.47E-05	1.07E-04
2027	1000000	14	75000	8	20000	0.00444	0.00359	0.00328	0.00298	0.00242	-3.14E-05	8.12E-05
2028	1000000	14	75000	8	50000	0.0028	0.002	0.00174	0.00151	0.00113	-2.76E-05	5.14E-05
2029	1000000	14	75000	10	5000	0.0088	0.00788	0.00749	0.00709	0.00624	-3.68E-05	1.27E-04
2030	1000000	14	75000	10	10000	0.00622	0.00534	0.00499	0.00465	0.00397	-3.36E-05	9.93E-05
2031	1000000	14	75000	10	20000	0.00433	0.00349	0.00319	0.0029	0.00237	-3.07E-05	7.47E-05
2032	1000000	14	75000	10	50000	0.00278	0.00198	0.00172	0.0015	0.00112	-2.74E-05	4.65E-05
2033	1000000	14	75000	12	5000	0.00839	0.00749	0.00711	0.00672	0.00592	-3.55E-05	1.18E-04
2034	1000000	14	75000	12	10000	0.00601	0.00514	0.0048	0.00447	0.00382	-3.26E-05	9.22E-05
2035	1000000	14	75000	12	20000	0.00423	0.0034	0.0031	0.00282	0.00231	-3.01E-05	6.88E-05
2036	1000000	14	75000	12	50000	0.00276	0.00196	0.00171	0.00148	0.00111	-2.72E-05	4.23E-05
2037	1000000	14	75000	14	5000	0.00798	0.00709	0.00673	0.00636	0.0056	-3.43E-05	1.10E-04
2038	1000000	14	75000	14	10000	0.0058	0.00494	0.00461	0.00429	0.00367	-3.18E-05	8.57E-05
2039	1000000	14	75000	14	20000	0.00414	0.00331	0.00302	0.00274	0.00224	-2.96E-05	6.36E-05
2040	1000000	14	75000	14	50000	0.00274	0.00194	0.00169	0.00147	0.0011	-2.71E-05	3.88E-05
2041	1000000	14	100000	6	5000	0.00938	0.00845	0.00804	0.0076	0.00669	-3.82E-05	1.41E-04
2042	1000000	14	100000	6	10000	0.00652	0.00563	0.00527	0.00491	0.00418	-3.43E-05	1.13E-04
2043	1000000	14	100000	6	20000	0.00447	0.00362	0.00331	0.00301	0.00245	-3.08E-05	8.82E-05
2044	1000000	14	100000	6	50000	0.00277	0.00197	0.00172	0.0015	0.00112	-2.66E-05	5.88E-05
2045	1000000	14	100000	8	5000	0.00893	0.00801	0.00762	0.00721	0.00636	-3.61E-05	1.31E-04
2046	1000000	14	100000	8	10000	0.00627	0.0054	0.00505	0.00471	0.00403	-3.27E-05	1.04E-04
2047	1000000	14	100000	8	20000	0.00434	0.0035	0.0032	0.00291	0.00238	-2.97E-05	8.05E-05
2048	1000000	14	100000	8	50000	0.00273	0.00194	0.00169	0.00147	0.00111	-2.61E-05	5.27E-05
2049	1000000	14	100000	10	5000	0.00846	0.00756	0.00719	0.0068	0.00601	-3.44E-05	1.21E-04
2050	1000000	14	100000	10	10000	0.00602	0.00516	0.00483	0.0045	0.00386	-3.14E-05	9.61E-05

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
2051	1000000	14	100000	10	20000	0.00421	0.00338	0.00309	0.00282	0.00231	-2.88E-05	7.35E-05
2052	1000000	14	100000	10	50000	0.00269	0.0019	0.00166	0.00145	0.00109	-2.57E-05	4.75E-05
2053	1000000	14	100000	12	5000	0.00798	0.0071	0.00675	0.00639	0.00564	-3.28E-05	1.12E-04
2054	1000000	14	100000	12	10000	0.00577	0.00492	0.0046	0.00429	0.00369	-3.03E-05	8.85E-05
2055	1000000	14	100000	12	20000	0.00408	0.00326	0.00298	0.00272	0.00224	-0.000028	6.74E-05
2056	1000000	14	100000	12	50000	0.00266	0.00187	0.00163	0.00142	0.00108	-2.54E-05	4.30E-05
2057	1000000	14	100000	14	5000	0.00752	0.00665	0.00631	0.00597	0.00527	-3.16E-05	1.03E-04
2058	1000000	14	100000	14	10000	0.00553	0.00469	0.00438	0.00409	0.00351	-2.94E-05	8.16E-05
2059	1000000	14	100000	14	20000	0.00397	0.00315	0.00288	0.00263	0.00216	-2.74E-05	6.19E-05
2060	1000000	14	100000	14	50000	0.00262	0.00184	0.0016	0.0014	0.00106	-2.52E-05	3.92E-05
2061	1000000	14	125000	6	5000	0.0092	0.00828	0.00788	0.00746	0.00657	-3.65E-05	1.37E-04
2062	1000000	14	125000	6	10000	0.00642	0.00554	0.00519	0.00484	0.00413	-3.28E-05	1.11E-04
2063	1000000	14	125000	6	20000	0.0044	0.00356	0.00326	0.00297	0.00243	-2.95E-05	8.73E-05
2064	1000000	14	125000	6	50000	0.00273	0.00194	0.00169	0.00148	0.00111	-2.54E-05	5.94E-05
2065	1000000	14	125000	8	5000	0.00868	0.00778	0.00741	0.00702	0.0062	-3.41E-05	1.26E-04
2066	1000000	14	125000	8	10000	0.00613	0.00527	0.00494	0.00461	0.00395	-0.000031	1.02E-04
2067	1000000	14	125000	8	20000	0.00425	0.00342	0.00313	0.00286	0.00235	-2.81E-05	7.92E-05
2068	1000000	14	125000	8	50000	0.00267	0.00189	0.00165	0.00144	0.00109	-2.48E-05	5.30E-05
2069	1000000	14	125000	10	5000	0.00815	0.00727	0.00692	0.00656	0.0058	-3.22E-05	1.16E-04
2070	1000000	14	125000	10	10000	0.00585	0.005	0.00469	0.00438	0.00376	-2.96E-05	9.28E-05
2071	1000000	14	125000	10	20000	0.0041	0.00328	0.00301	0.00275	0.00226	-2.71E-05	7.19E-05
2072	1000000	14	125000	10	50000	0.00262	0.00184	0.00161	0.00141	0.00107	-2.43E-05	4.76E-05
2073	1000000	14	125000	12	5000	0.00763	0.00677	0.00643	0.00609	0.00539	-3.06E-05	1.06E-04
2074	1000000	14	125000	12	10000	0.00557	0.00473	0.00443	0.00414	0.00357	-2.83E-05	8.49E-05
2075	1000000	14	125000	12	20000	0.00396	0.00315	0.00289	0.00264	0.00218	-2.63E-05	6.55E-05
2076	1000000	14	125000	12	50000	0.002575	0.001801	0.001573	0.00138	0.00105	-2.39E-05	4.30E-05
2077	1000000	14	125000	14	5000	0.007127	0.006279	0.005961	0.00564	0.004995	-2.92E-05	9.68E-05
2078	1000000	14	125000	14	10000	0.005297	0.004474	0.004186	0.00391	0.003373	-2.73E-05	7.78E-05
2079	1000000	14	125000	14	20000	0.003824	0.003025	0.002767	0.00253	0.002096	-2.56E-05	5.99E-05
2080	1000000	14	125000	14	50000	0.002531	0.001761	0.001537	0.00135	0.001029	-2.36E-05	3.90E-05
2081	1000000	14	150000	6	5000	0.009034	0.008124	0.007734	0.00733	0.006462	-3.49E-05	1.34E-04
2082	1000000	14	150000	6	10000	0.006322	0.005451	0.00511	0.00477	0.004081	-3.15E-05	1.09E-04
2083	1000000	14	150000	6	20000	0.004342	0.00351	0.003215	0.00293	0.002403	-2.82E-05	8.60E-05
2084	1000000	14	150000	6	50000	0.002691	0.001908	0.001669	0.00146	0.001104	-2.44E-05	5.95E-05
2085	1000000	14	150000	8	5000	0.008461	0.007575	0.007212	0.00684	0.006045	-3.24E-05	1.22E-04
2086	1000000	14	150000	8	10000	0.006006	0.005155	0.004835	0.00452	0.003882	-2.95E-05	9.87E-05
2087	1000000	14	150000	8	20000	0.004172	0.003354	0.003075	0.00281	0.002315	-2.68E-05	7.76E-05
2088	1000000	14	150000	8	50000	0.002626	0.00185	0.00162	0.00142	0.00108	-2.36E-05	5.29E-05
2089	1000000	14	150000	10	5000	0.007885	0.00702	0.006681	0.00633	0.005611	-3.03E-05	1.11E-04
2090	1000000	14	150000	10	10000	0.005693	0.004859	0.004557	0.00426	0.003674	-2.79E-05	8.97E-05
2091	1000000	14	150000	10	20000	0.004008	0.003203	0.002936	0.00269	0.002224	-2.56E-05	7.01E-05
2092	1000000	14	150000	10	50000	0.002565	0.001796	0.001572	0.00138	0.001055	-2.3E-05	4.73E-05
2093	1000000	14	150000	12	5000	0.007324	0.006477	0.006159	0.00584	0.005176	-2.86E-05	1.01E-04
2094	1000000	14	150000	12	10000	0.00539	0.004569	0.004283	0.00401	0.003462	-2.66E-05	8.15E-05
2095	1000000	14	150000	12	20000	0.003852	0.003057	0.002801	0.00257	0.002132	-2.47E-05	6.36E-05
2096	1000000	14	150000	12	50000	0.002508	0.001745	0.001527	0.00134	0.00103	-2.25E-05	4.26E-05
2097	1000000	14	150000	14	5000	0.006791	0.00596	0.005659	0.00536	0.004754	-2.72E-05	9.15E-05
2098	1000000	14	150000	14	10000	0.0051	0.004291	0.004018	0.00376	0.003252	-2.55E-05	7.43E-05
2099	1000000	14	150000	14	20000	0.003705	0.002918	0.002672	0.00245	0.002039	-2.4E-05	5.78E-05
2100	1000000	14	150000	14	50000	0.002457	0.001698	0.001484	0.0013	0.001005	-2.22E-05	3.85E-05

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
2101	2000000	2	50000	6	5000	0.03575	0.0241	0.01788	0.01291	0.005555	-0.000228	1.70E-03
2102	2000000	2	50000	6	10000	0.02414	0.01435	0.009904	0.00678	0.002831	-0.000204	1.25E-03
2103	2000000	2	50000	6	20000	0.01634	0.00821	0.005158	0.00333	0.001384	-0.000182	8.54E-04
2104	2000000	2	50000	6	50000	0.01022	0.003819	0.002046	0.00124	0.0005405	-0.000158	4.57E-04
2105	2000000	2	50000	8	5000	0.03029	0.02027	0.01523	0.01119	0.004934	-0.0002	1.35E-03
2106	2000000	2	50000	8	10000	0.02155	0.01279	0.008993	0.0063	0.002694	-0.000186	1.00E-03
2107	2000000	2	50000	8	20000	0.0153	0.007684	0.004922	0.00325	0.001368	-0.000173	6.93E-04
2108	2000000	2	50000	8	50000	0.01022	0.003826	0.002055	0.00125	0.0005433	-0.000158	3.73E-04
2109	2000000	2	50000	10	5000	0.02597	0.01702	0.01282	0.0095	0.004251	-0.000183	1.08E-03
2110	2000000	2	50000	10	10000	0.01948	0.01139	0.008073	0.00574	0.002497	-0.000175	8.11E-04
2111	2000000	2	50000	10	20000	0.01447	0.007196	0.004656	0.00313	0.001333	-0.000167	5.66E-04
2112	2000000	2	50000	10	50000	0.01022	0.00383	0.002061	0.00125	0.0005457	-0.000157	3.07E-04
2113	2000000	2	50000	12	5000	0.02263	0.01439	0.0108	0.00802	0.003623	-0.000173	8.67E-04
2114	2000000	2	50000	12	10000	0.01781	0.01018	0.007216	0.00517	0.002279	-0.000168	6.64E-04
2115	2000000	2	50000	12	20000	0.0138	0.006755	0.004384	0.00298	0.001283	-0.000163	4.67E-04
2116	2000000	2	50000	12	50000	0.01022	0.003831	0.002065	0.00126	0.0005476	-0.000157	2.54E-04
2117	2000000	2	50000	14	5000	0.02007	0.01232	0.009163	0.00681	0.003092	-0.000167	7.05E-04
2118	2000000	2	50000	14	10000	0.01647	0.009151	0.006455	0.00464	0.002065	-0.000164	5.48E-04
2119	2000000	2	50000	14	20000	0.01324	0.006365	0.004121	0.00281	0.001226	-0.000161	3.89E-04
2120	2000000	2	50000	14	50000	0.01021	0.003831	0.002066	0.00126	0.000549	-0.000157	2.13E-04
2121	2000000	2	75000	6	5000	0.03158	0.02187	0.01662	0.01224	0.005358	-0.00018	1.47E-03
2122	2000000	2	75000	6	10000	0.02155	0.01332	0.009507	0.00668	0.002826	-0.000163	1.11E-03
2123	2000000	2	75000	6	20000	0.01457	0.007695	0.005054	0.00336	0.001398	-0.000147	7.93E-04
2124	2000000	2	75000	6	50000	0.00892	0.003547	0.002031	0.00127	0.0005419	-0.000128	4.52E-04
2125	2000000	2	75000	8	5000	0.02567	0.0176	0.01354	0.01013	0.004539	-0.000153	1.13E-03
2126	2000000	2	75000	8	10000	0.01859	0.01146	0.008353	0.00601	0.002612	-0.000144	8.69E-04
2127	2000000	2	75000	8	20000	0.01322	0.006989	0.004708	0.00322	0.001364	-0.000136	6.29E-04
2128	2000000	2	75000	8	50000	0.00865	0.003441	0.002002	0.00127	0.000543	-0.000125	3.63E-04
2129	2000000	2	75000	10	5000	0.02124	0.01419	0.01093	0.00823	0.003735	-0.000138	8.78E-04
2130	2000000	2	75000	10	10000	0.0163	0.009861	0.007244	0.00528	0.002336	-0.000134	6.89E-04
2131	2000000	2	75000	10	20000	0.01217	0.00635	0.004333	0.00302	0.0013	-0.000129	5.04E-04
2132	2000000	2	75000	10	50000	0.008438	0.003339	0.001961	0.00126	0.0005408	-0.000123	2.94E-04
2133	2000000	2	75000	12	5000	0.01797	0.01157	0.008873	0.0067	0.00306	-0.000129	6.92E-04
2134	2000000	2	75000	12	10000	0.01451	0.008525	0.006262	0.0046	0.002057	-0.000128	5.54E-04
2135	2000000	2	75000	12	20000	0.01134	0.005787	0.003965	0.00279	0.001219	-0.000125	4.10E-04
2136	2000000	2	75000	12	50000	0.008268	0.003243	0.001912	0.00124	0.0005356	-0.000122	2.41E-04
2137	2000000	2	75000	14	5000	0.01558	0.009614	0.007301	0.00551	0.002527	-0.000125	5.53E-04
2138	2000000	2	75000	14	10000	0.01312	0.007437	0.005431	0.004	0.001804	-0.000124	4.51E-04
2139	2000000	2	75000	14	20000	0.01067	0.005301	0.003624	0.00257	0.001134	-0.000123	3.38E-04
2140	2000000	2	75000	14	50000	0.008131	0.003155	0.001861	0.00121	0.0005279	-0.000121	2.00E-04
2141	2000000	2	100000	6	5000	0.02858	0.0202	0.0156	0.01163	0.005152	-0.000147	1.30E-03
2142	2000000	2	100000	6	10000	0.01972	0.01256	0.009173	0.00656	0.002805	-0.000135	1.00E-03
2143	2000000	2	100000	6	20000	0.01336	0.007344	0.004973	0.00338	0.001409	-0.000123	7.33E-04
2144	2000000	2	100000	6	50000	0.008097	0.003395	0.002029	0.00129	0.0005454	-0.000108	4.37E-04
2145	2000000	2	100000	8	5000	0.02253	0.01572	0.01227	0.00928	0.004202	-0.000122	9.76E-04
2146	2000000	2	100000	8	10000	0.01659	0.01053	0.007849	0.00574	0.002524	-0.000117	7.69E-04
2147	2000000	2	100000	8	20000	0.01185	0.006527	0.004544	0.00318	0.001356	-0.000111	5.72E-04
2148	2000000	2	100000	8	50000	0.007678	0.003225	0.001974	0.00129	0.0005449	-0.000103	3.46E-04
2149	2000000	2	100000	10	5000	0.01816	0.0123	0.00961	0.00731	0.003344	-0.000109	7.45E-04
2150	2000000	2	100000	10	10000	0.0142	0.00882	0.00663	0.00491	0.00219	-0.000107	6.01E-04

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
2151	2000000	2	100000	10	20000	0.0107	0.0058	0.0041	0.00291	0.00127	-0.000104	4.53E-04
2152	2000000	2	100000	10	50000	0.00736	0.00306	0.0019	0.00126	0.000538	-0.000101	2.77E-04
2153	2000000	2	100000	12	5000	0.0151	0.00979	0.00761	0.00579	0.00267	-0.000102	5.78E-04
2154	2000000	2	100000	12	10000	0.0124	0.00745	0.00559	0.00417	0.00188	-0.000101	4.77E-04
2155	2000000	2	100000	12	20000	0.0098	0.00518	0.00367	0.00264	0.00116	-0.000101	3.65E-04
2156	2000000	2	100000	12	50000	0.0071	0.00291	0.00182	0.00122	0.000527	-9.93E-05	2.25E-04
2157	2000000	2	100000	14	5000	0.0129	0.00797	0.00614	0.00467	0.00216	-9.81E-05	4.57E-04
2158	2000000	2	100000	14	10000	0.011	0.00636	0.00475	0.00354	0.00161	-9.84E-05	3.84E-04
2159	2000000	2	100000	14	20000	0.00908	0.00464	0.00329	0.00238	0.00106	-9.86E-05	2.98E-04
2160	2000000	2	100000	14	50000	0.0069	0.00278	0.00174	0.00118	0.000512	-9.84E-05	1.86E-04
2161	2000000	2	125000	6	5000	0.0263	0.0189	0.0147	0.0111	0.00496	-0.000122	1.17E-03
2162	2000000	2	125000	6	10000	0.0183	0.012	0.00888	0.00643	0.00277	-0.000113	9.12E-04
2163	2000000	2	125000	6	20000	0.0125	0.00707	0.0049	0.00338	0.00142	-0.000104	6.81E-04
2164	2000000	2	125000	6	50000	0.00751	0.00329	0.00203	0.00131	0.000549	-9.26E-05	4.19E-04
2165	2000000	2	125000	8	5000	0.0202	0.0143	0.0113	0.00859	0.00392	-9.91E-05	8.63E-04
2166	2000000	2	125000	8	10000	0.01511	0.009807	0.00743	0.0055	0.002438	-9.61E-05	6.91E-04
2167	2000000	2	125000	8	20000	0.01086	0.006179	0.004404	0.00312	0.001344	-9.26E-05	5.25E-04
2168	2000000	2	125000	8	50000	0.006995	0.003077	0.001952	0.0013	0.000547	-8.73E-05	3.29E-04
2169	2000000	2	125000	10	5000	0.01598	0.01094	0.008628	0.0066	0.003039	-8.8E-05	6.50E-04
2170	2000000	2	125000	10	10000	0.01271	0.008052	0.006143	0.00459	0.00207	-8.74E-05	5.34E-04
2171	2000000	2	125000	10	20000	0.009648	0.005398	0.003901	0.00282	0.001234	-8.64E-05	4.12E-04
2172	2000000	2	125000	10	50000	0.006607	0.002876	0.001856	0.00126	0.0005363	-8.45E-05	2.61E-04
2173	2000000	2	125000	12	5000	0.01305	0.008555	0.00671	0.00514	0.002375	-8.25E-05	4.99E-04
2174	2000000	2	125000	12	10000	0.01093	0.006671	0.005085	0.00382	0.001738	-8.29E-05	4.20E-04
2175	2000000	2	125000	12	20000	0.008711	0.004734	0.003436	0.00251	0.001113	-8.31E-05	3.29E-04
2176	2000000	2	125000	12	50000	0.006304	0.002695	0.001753	0.0012	0.0005193	-8.3E-05	2.11E-04
2177	2000000	2	125000	14	5000	0.01101	0.006866	0.005336	0.00408	0.001891	-7.98E-05	3.91E-04
2178	2000000	2	125000	14	10000	0.0096	0.0056	0.00425	0.0032	0.00146	-8.06E-05	3.35E-04
2179	2000000	2	125000	14	20000	0.00798	0.00418	0.00303	0.00222	0.000996	-8.13E-05	2.67E-04
2180	2000000	2	125000	14	50000	0.00606	0.00253	0.00165	0.00114	0.000498	-8.21E-05	1.73E-04
2181	2000000	2	150000	6	5000	0.0244	0.0177	0.0139	0.0106	0.00475	-0.000105	1.05E-03
2182	2000000	2	150000	6	10000	0.0172	0.0115	0.00861	0.00629	0.00274	-9.66E-05	8.41E-04
2183	2000000	2	150000	6	20000	0.0117	0.00685	0.00483	0.00337	0.00142	-8.98E-05	6.36E-04
2184	2000000	2	150000	6	50000	0.00705	0.00321	0.00203	0.00132	0.000553	-8.06E-05	4.01E-04
2185	2000000	2	150000	8	5000	0.0184	0.0132	0.0105	0.00802	0.00368	-8.22E-05	7.76E-04
2186	2000000	2	150000	8	10000	0.014	0.00922	0.00707	0.00528	0.00236	-8.06E-05	6.30E-04
2187	2000000	2	150000	8	20000	0.0101	0.0059	0.00428	0.00307	0.00133	-7.85E-05	4.85E-04
2188	2000000	2	150000	8	50000	0.00648	0.00297	0.00193	0.0013	0.000549	-0.000075	3.12E-04
2189	2000000	2	150000	10	5000	0.0143	0.0099	0.00787	0.00605	0.0028	-7.26E-05	5.78E-04
2190	2000000	2	150000	10	10000	0.0116	0.00745	0.00575	0.00433	0.00196	-7.29E-05	4.83E-04
2191	2000000	2	150000	10	20000	0.00885	0.00508	0.00374	0.00273	0.0012	-7.28E-05	3.78E-04
2192	2000000	2	150000	10	50000	0.00605	0.00274	0.00182	0.00125	0.000534	-7.22E-05	2.47E-04
2193	2000000	2	150000	12	5000	0.0116	0.00764	0.00603	0.00464	0.00215	-6.82E-05	4.40E-04
2194	2000000	2	150000	12	10000	0.00981	0.00608	0.00468	0.00354	0.00162	-6.91E-05	3.76E-04
2195	2000000	2	150000	12	20000	0.0079	0.00439	0.00324	0.00239	0.00107	-0.00007	3.01E-04
2196	2000000	2	150000	12	50000	0.00572	0.00253	0.0017	0.00118	0.000512	-7.07E-05	1.98E-04
2197	2000000	2	150000	14	5000	0.00968	0.00606	0.00475	0.00365	0.00169	-6.63E-05	3.42E-04
2198	2000000	2	150000	14	10000	0.00853	0.00504	0.00386	0.00293	0.00134	-6.73E-05	2.99E-04
2199	2000000	2	150000	14	20000	0.007158	0.003829	0.002821	0.00209	0.0009416	-6.85E-05	2.42E-04
2200	2000000	2	150000	14	50000	0.00545	0.00235	0.00158	0.00111	0.000486	-6.98E-05	1.62E-04

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
2201	2000000	4	50000	6	5000	0.02502	0.02087	0.01799	0.01529	0.01073	-0.00014	7.40E-04
2202	2000000	4	50000	6	10000	0.0163	0.0127	0.01043	0.00845	0.00546	-0.000125	5.54E-04
2203	2000000	4	50000	6	20000	0.01071	0.007617	0.005871	0.00449	0.002658	-0.000112	3.91E-04
2204	2000000	4	50000	6	50000	0.0064	0.003869	0.002667	0.00186	0.0009888	-9.67E-05	2.19E-04
2205	2000000	4	50000	8	5000	0.02302	0.0192	0.01664	0.01425	0.01022	-0.00013	6.48E-04
2206	2000000	4	50000	8	10000	0.01529	0.01191	0.009836	0.00804	0.005325	-0.000118	4.84E-04
2207	2000000	4	50000	8	20000	0.01029	0.00731	0.00566	0.00436	0.002638	-0.000108	3.41E-04
2208	2000000	4	50000	8	50000	0.006403	0.003873	0.002672	0.00186	0.0009927	-9.66E-05	1.89E-04
2209	2000000	4	50000	10	5000	0.02116	0.01761	0.0153	0.01319	0.009622	-0.000122	5.65E-04
2210	2000000	4	50000	10	10000	0.01438	0.01117	0.009256	0.00762	0.00515	-0.000113	4.22E-04
2211	2000000	4	50000	10	20000	0.00991	0.007023	0.005452	0.00423	0.002604	-0.000105	2.97E-04
2212	2000000	4	50000	10	50000	0.006405	0.003876	0.002676	0.00187	0.0009963	-9.66E-05	1.64E-04
2213	2000000	4	50000	12	5000	0.01948	0.01613	0.01403	0.01213	0.008968	-0.000116	4.93E-04
2214	2000000	4	50000	12	10000	0.01357	0.01049	0.008704	0.00721	0.004947	-0.000109	3.69E-04
2215	2000000	4	50000	12	20000	0.009575	0.006758	0.005253	0.0041	0.002559	-0.000103	2.59E-04
2216	2000000	4	50000	12	50000	0.006405	0.003878	0.002678	0.00187	0.0009993	-9.65E-05	1.43E-04
2217	2000000	4	50000	14	5000	0.01798	0.01478	0.01284	0.01113	0.008298	-0.000111	4.31E-04
2218	2000000	4	50000	14	10000	0.01285	0.009875	0.008188	0.0068	0.004725	-0.000106	3.24E-04
2219	2000000	4	50000	14	20000	0.00928	0.006517	0.005064	0.00396	0.002505	-0.000102	2.28E-04
2220	2000000	4	50000	14	50000	0.006405	0.003878	0.00268	0.00187	0.001002	-9.65E-05	1.25E-04
2221	2000000	4	75000	6	5000	0.0236	0.01982	0.01722	0.01477	0.01056	-0.000125	6.87E-04
2222	2000000	4	75000	6	10000	0.0154	0.01211	0.01004	0.00823	0.00544	-0.000113	5.26E-04
2223	2000000	4	75000	6	20000	0.01009	0.007249	0.005662	0.00439	0.002668	-0.000101	3.85E-04
2224	2000000	4	75000	6	50000	0.005929	0.003617	0.002542	0.00181	0.0009976	-8.73E-05	2.28E-04
2225	2000000	4	75000	8	5000	0.02121	0.01782	0.01559	0.0135	0.009905	-0.000113	5.86E-04
2226	2000000	4	75000	8	10000	0.0142	0.0111	0.0093	0.00772	0.00526	-0.000104	4.50E-04
2227	2000000	4	75000	8	20000	0.00949	0.00682	0.00537	0.00422	0.00264	-9.58E-05	3.29E-04
2228	2000000	4	75000	8	50000	0.00581	0.00354	0.0025	0.00179	0.001	-8.59E-05	1.94E-04
2229	2000000	4	75000	10	5000	0.0191	0.016	0.014	0.0122	0.00915	-0.000104	5.00E-04
2230	2000000	4	75000	10	10000	0.0131	0.0102	0.0086	0.0072	0.00503	-9.82E-05	3.85E-04
2231	2000000	4	75000	10	20000	0.00898	0.00642	0.00508	0.00403	0.00259	-9.21E-05	2.82E-04
2232	2000000	4	75000	10	50000	0.0057	0.00347	0.00245	0.00177	0.001	-8.48E-05	1.66E-04
2233	2000000	4	75000	12	5000	0.0172	0.0143	0.0126	0.011	0.00835	-9.82E-05	4.27E-04
2234	2000000	4	75000	12	10000	0.0121	0.00943	0.00794	0.00669	0.00476	-9.39E-05	3.31E-04
2235	2000000	4	75000	12	20000	0.00853	0.00607	0.00481	0.00385	0.00252	-8.94E-05	2.43E-04
2236	2000000	4	75000	12	50000	0.00561	0.0034	0.00241	0.00174	0.000999	-8.41E-05	1.43E-04
2237	2000000	4	75000	14	5000	0.0171	0.01439	0.01283	0.01148	0.009219	-9.36E-05	3.63E-04
2238	2000000	4	75000	14	10000	0.0113	0.00871	0.00734	0.00621	0.00447	-9.07E-05	2.86E-04
2239	2000000	4	75000	14	20000	0.00815	0.00576	0.00456	0.00366	0.00244	-8.75E-05	2.10E-04
2240	2000000	4	75000	14	50000	0.00553	0.00334	0.00237	0.00172	0.000994	-8.35E-05	1.24E-04
2241	2000000	4	100000	6	5000	0.0225	0.019	0.0166	0.0143	0.0104	-0.000113	6.41E-04
2242	2000000	4	100000	6	10000	0.0147	0.0116	0.00974	0.00806	0.00542	-0.000103	4.98E-04
2243	2000000	4	100000	6	20000	0.00962	0.00698	0.00551	0.00433	0.00268	-9.24E-05	3.72E-04
2244	2000000	4	100000	6	50000	0.00561	0.00346	0.00247	0.00179	0.00101	-0.00008	2.29E-04
2245	2000000	4	100000	8	5000	0.0198	0.0168	0.0148	0.0129	0.00962	-0.0001	5.36E-04
2246	2000000	4	100000	8	10000	0.01329	0.01053	0.0089	0.00747	0.0052	-9.32E-05	4.18E-04
2247	2000000	4	100000	8	20000	0.00892	0.00647	0.00516	0.00412	0.00264	-8.62E-05	3.13E-04
2248	2000000	4	100000	8	50000	0.00541	0.00333	0.0024	0.00176	0.00101	-7.77E-05	1.93E-04
2249	2000000	4	100000	10	5000	0.0175	0.0148	0.0131	0.0115	0.00874	-9.16E-05	4.49E-04
2250	2000000	4	100000	10	10000	0.0121	0.00955	0.00811	0.00688	0.00492	-8.68E-05	3.52E-04

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
2251	2000000	4	100000	10	20000	0.00832	0.00601	0.00483	0.0039	0.00257	-8.21E-05	2.64E-04
2252	2000000	4	100000	10	50000	0.00524	0.00322	0.00232	0.00172	0.00101	-7.61E-05	1.63E-04
2253	2000000	4	100000	12	5000	0.0156	0.013	0.0115	0.0102	0.00783	-8.56E-05	3.79E-04
2254	2000000	4	100000	12	10000	0.0111	0.00868	0.00739	0.00632	0.0046	-8.25E-05	2.99E-04
2255	2000000	4	100000	12	20000	0.00781	0.00561	0.00452	0.00368	0.00248	-7.92E-05	2.25E-04
2256	2000000	4	100000	12	50000	0.0051	0.00311	0.00225	0.00168	0.001	-0.000075	1.39E-04
2257	2000000	4	100000	14	5000	0.0139	0.0115	0.0101	0.00897	0.00697	-8.15E-05	3.22E-04
2258	2000000	4	100000	14	10000	0.0102	0.00791	0.00674	0.00578	0.00426	-7.94E-05	2.56E-04
2259	2000000	4	100000	14	20000	0.00738	0.00525	0.00423	0.00346	0.00238	-7.72E-05	1.93E-04
2260	2000000	4	100000	14	50000	0.00497	0.00302	0.00219	0.00163	0.000992	-7.42E-05	1.20E-04
2261	2000000	4	125000	6	5000	0.0215	0.0183	0.0161	0.014	0.0102	-0.000103	6.01E-04
2262	2000000	4	125000	6	10000	0.0141	0.0113	0.00949	0.00791	0.0054	-9.41E-05	4.72E-04
2263	2000000	4	125000	6	20000	0.00925	0.00677	0.0054	0.00428	0.00269	-8.51E-05	3.57E-04
2264	2000000	4	125000	6	50000	0.00537	0.00335	0.00242	0.00178	0.00102	-0.000074	2.26E-04
2265	2000000	4	125000	8	5000	0.0187	0.0159	0.0141	0.0124	0.00936	-0.00009	4.94E-04
2266	2000000	4	125000	8	10000	0.01259	0.01006	0.008571	0.00726	0.005138	-8.42E-05	3.90E-04
2267	2000000	4	125000	8	20000	0.00846	0.0062	0.005	0.00404	0.00264	-7.84E-05	2.97E-04
2268	2000000	4	125000	8	50000	0.00511	0.00319	0.00233	0.00173	0.00102	-7.11E-05	1.89E-04
2269	2000000	4	125000	10	5000	0.0163	0.0138	0.0123	0.0109	0.00838	-8.15E-05	4.09E-04
2270	2000000	4	125000	10	10000	0.0113	0.00901	0.00773	0.00662	0.00481	-7.78E-05	3.25E-04
2271	2000000	4	125000	10	20000	0.00781	0.0057	0.00463	0.00379	0.00255	-0.000074	2.48E-04
2272	2000000	4	125000	10	50000	0.0049	0.00304	0.00224	0.00168	0.00102	-6.91E-05	1.58E-04
2273	2000000	4	125000	12	5000	0.0143	0.012	0.0107	0.0095	0.0074	-7.59E-05	3.41E-04
2274	2000000	4	125000	12	10000	0.0103	0.0081	0.00697	0.00601	0.00445	-7.36E-05	2.73E-04
2275	2000000	4	125000	12	20000	0.00727	0.00526	0.0043	0.00355	0.00245	-7.11E-05	2.10E-04
2276	2000000	4	125000	12	50000	0.00472	0.00291	0.00215	0.00215	0.00101	-6.78E-05	1.34E-04
2277	2000000	4	125000	14	5000	0.0126	0.0104	0.00928	0.00827	0.00649	-7.21E-05	2.87E-04
2278	2000000	4	125000	14	10000	0.00935	0.00731	0.00628	0.00544	0.00409	-7.07E-05	2.32E-04
2279	2000000	4	125000	14	20000	0.00681	0.00488	0.00399	0.00331	0.00233	-6.91E-05	1.79E-04
2280	2000000	4	125000	14	50000	0.00457	0.00279	0.00206	0.00158	0.000989	-6.69E-05	1.15E-04
2281	2000000	4	150000	6	5000	0.0207	0.0176	0.0156	0.0136	0.0101	-9.48E-05	5.67E-04
2282	2000000	4	150000	6	10000	0.0136	0.0109	0.00927	0.00778	0.00538	-8.68E-05	4.48E-04
2283	2000000	4	150000	6	20000	0.00893	0.00658	0.00529	0.00423	0.0027	-7.89E-05	3.43E-04
2284	2000000	4	150000	6	50000	0.00517	0.00326	0.00239	0.00177	0.00102	-6.89E-05	2.22E-04
2285	2000000	4	150000	8	5000	0.0178	0.0152	0.0135	0.012	0.00912	-8.16E-05	4.60E-04
2286	2000000	4	150000	8	10000	0.012	0.00966	0.00829	0.00708	0.00508	-7.68E-05	3.66E-04
2287	2000000	4	150000	8	20000	0.00809	0.00597	0.00487	0.00397	0.00264	-7.19E-05	2.82E-04
2288	2000000	4	150000	8	50000	0.00488	0.00307	0.00228	0.00172	0.00103	-6.55E-05	1.84E-04
2289	2000000	4	150000	10	5000	0.0153	0.013	0.0117	0.0104	0.00806	-7.33E-05	3.76E-04
2290	2000000	4	150000	10	10000	0.0107	0.00858	0.00741	0.0064	0.00471	-7.05E-05	3.02E-04
2291	2000000	4	150000	10	20000	0.0074	0.00544	0.00447	0.0037	0.00254	-6.74E-05	2.34E-04
2292	2000000	4	150000	10	50000	0.00463	0.0029	0.00217	0.00166	0.00102	-6.33E-05	1.53E-04
2293	2000000	4	150000	12	5000	0.0133	0.0112	0.01	0.00895	0.00703	-6.81E-05	3.11E-04
2294	2000000	4	150000	12	10000	0.00962	0.00764	0.00662	0.00576	0.00432	-6.64E-05	2.52E-04
2295	2000000	4	150000	12	20000	0.00683	0.00499	0.00412	0.00344	0.00242	-6.45E-05	1.96E-04
2296	2000000	4	150000	12	50000	0.00443	0.00275	0.00207	0.0016	0.00101	-6.19E-05	1.29E-04
2297	2000000	4	150000	14	5000	0.0116	0.00962	0.0086	0.0077	0.00609	-6.46E-05	2.60E-04
2298	2000000	4	150000	14	10000	0.0087	0.00683	0.00592	0.00517	0.00393	-6.37E-05	2.12E-04
2299	2000000	4	150000	14	20000	0.00636	0.00459	0.0038	0.00319	0.00228	-6.26E-05	1.66E-04
2300	2000000	4	150000	14	50000	0.00426	0.00262	0.00197	0.00153	0.000986	-6.09E-05	1.10E-04

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
2301	2000000	6	50000	6	5000	0.01846	0.01649	0.01504	0.01357	0.01079	-8.75E-05	3.97E-04
2302	2000000	6	50000	6	10000	0.01197	0.01022	0.00903	0.00788	0.00586	-7.89E-05	3.04E-04
2303	2000000	6	50000	6	20000	0.007822	0.006274	0.005309	0.00444	0.003053	-7.08E-05	2.20E-04
2304	2000000	6	50000	6	50000	0.004612	0.003297	0.002582	0.002	0.001223	-6.16E-05	1.28E-04
2305	2000000	6	50000	8	5000	0.01754	0.01566	0.01432	0.01295	0.01039	-8.32E-05	3.65E-04
2306	2000000	6	50000	8	10000	0.01149	0.009805	0.008676	0.00759	0.005703	-7.59E-05	2.76E-04
2307	2000000	6	50000	8	20000	0.007612	0.006099	0.005168	0.00433	0.003007	-6.91E-05	1.98E-04
2308	2000000	6	50000	8	50000	0.004615	0.0033	0.002585	0.00201	0.001226	-6.16E-05	1.13E-04
2309	2000000	6	50000	10	5000	0.01662	0.01482	0.01357	0.0123	0.009942	-7.95E-05	3.32E-04
2310	2000000	6	50000	10	10000	0.01102	0.009389	0.008317	0.0073	0.005531	-7.35E-05	2.51E-04
2311	2000000	6	50000	10	20000	0.007412	0.005929	0.005027	0.00422	0.002954	-6.78E-05	1.78E-04
2312	2000000	6	50000	10	50000	0.004617	0.003302	0.002588	0.00201	0.001228	-6.16E-05	1.00E-04
2313	2000000	6	50000	12	5000	0.01572	0.014	0.01282	0.01165	0.009475	-7.65E-05	3.02E-04
2314	2000000	6	50000	12	10000	0.01057	0.008988	0.007965	0.007	0.005348	-7.14E-05	2.27E-04
2315	2000000	6	50000	12	20000	0.007224	0.005766	0.00489	0.00411	0.002898	-6.67E-05	1.61E-04
2316	2000000	6	50000	12	50000	0.004618	0.003304	0.00259	0.00201	0.001231	-6.15E-05	8.98E-05
2317	2000000	6	50000	14	5000	0.01487	0.01321	0.01209	0.011	0.008997	-7.39E-05	2.74E-04
2318	2000000	6	50000	14	10000	0.01016	0.008609	0.007628	0.00672	0.005161	-6.98E-05	2.06E-04
2319	2000000	6	50000	14	20000	0.00705	0.005613	0.004759	0.00401	0.002839	-6.59E-05	1.46E-04
2320	2000000	6	50000	14	50000	0.004619	0.003305	0.002591	0.00201	0.001233	-6.15E-05	8.09E-05
2321	2000000	6	75000	6	5000	0.01783	0.01596	0.01461	0.01323	0.0106	-8.17E-05	3.81E-04
2322	2000000	6	75000	6	10000	0.01157	0.009905	0.008782	0.0077	0.005784	-7.39E-05	2.97E-04
2323	2000000	6	75000	6	20000	0.007535	0.006061	0.005154	0.00433	0.00302	-6.64E-05	2.21E-04
2324	2000000	6	75000	6	50000	0.00438	0.003134	0.002471	0.00194	0.001206	-5.76E-05	1.35E-04
2325	2000000	6	75000	8	5000	0.01668	0.01493	0.0137	0.01245	0.01009	-7.62E-05	3.43E-04
2326	2000000	6	75000	8	10000	0.01094	0.009362	0.008324	0.00733	0.005584	-6.99E-05	2.66E-04
2327	2000000	6	75000	8	20000	0.007227	0.005806	0.00495	0.00418	0.002955	-6.39E-05	1.97E-04
2328	2000000	6	75000	8	50000	0.004315	0.003085	0.002435	0.00191	0.001201	-5.69E-05	1.19E-04
2329	2000000	6	75000	10	5000	0.01555	0.0139	0.01278	0.01165	0.009544	-7.18E-05	3.06E-04
2330	2000000	6	75000	10	10000	0.01034	0.008834	0.007869	0.00696	0.005364	-6.68E-05	2.37E-04
2331	2000000	6	75000	10	20000	0.006938	0.005562	0.00475	0.00403	0.002881	-6.2E-05	1.75E-04
2332	2000000	6	75000	10	50000	0.004255	0.003037	0.0024	0.00189	0.001194	-5.63E-05	1.05E-04
2333	2000000	6	75000	12	5000	0.01449	0.01292	0.01189	0.01087	0.008973	-6.82E-05	2.73E-04
2334	2000000	6	75000	12	10000	0.009787	0.008337	0.007434	0.00659	0.005134	-6.43E-05	2.11E-04
2335	2000000	6	75000	12	20000	0.006674	0.005334	0.004558	0.00388	0.002802	-6.04E-05	1.56E-04
2336	2000000	6	75000	12	50000	0.004201	0.002993	0.002365	0.00186	0.001186	-5.59E-05	9.28E-05
2337	2000000	6	75000	14	5000	0.0135	0.01201	0.01104	0.01011	0.008401	-6.54E-05	2.44E-04
2338	2000000	6	75000	14	10000	0.009279	0.007876	0.007024	0.00624	0.004901	-6.23E-05	1.89E-04
2339	2000000	6	75000	14	20000	0.006434	0.005123	0.004378	0.00373	0.002719	-5.92E-05	1.39E-04
2340	2000000	6	75000	14	50000	0.004151	0.002951	0.002332	0.00184	0.001176	-5.55E-05	8.28E-05
2341	2000000	6	100000	6	5000	0.01729	0.01551	0.01424	0.01293	0.01043	-7.66E-05	3.65E-04
2342	2000000	6	100000	6	10000	0.01124	0.009642	0.008579	0.00755	0.005723	-6.95E-05	2.87E-04
2343	2000000	6	100000	6	20000	0.007312	0.005899	0.005039	0.00426	0.003	-6.26E-05	2.18E-04
2344	2000000	6	100000	6	50000	0.004222	0.003029	0.002403	0.0019	0.0012	-5.43E-05	1.38E-04
2345	2000000	6	100000	8	5000	0.01596	0.01432	0.01318	0.01203	0.009844	-7.03E-05	3.23E-04
2346	2000000	6	100000	8	10000	0.0105	0.009007	0.008043	0.00712	0.005488	-6.49E-05	2.54E-04
2347	2000000	6	100000	8	20000	0.006932	0.005587	0.00479	0.00407	0.002921	-5.95E-05	1.92E-04
2348	2000000	6	100000	8	50000	0.004111	0.002945	0.002342	0.00186	0.001191	-5.31E-05	1.20E-04
2349	2000000	6	100000	10	5000	0.0147	0.01317	0.01215	0.01113	0.009213	-6.55E-05	2.84E-04
2350	2000000	6	100000	10	10000	0.009812	0.008403	0.007523	0.00669	0.005232	-6.13E-05	2.23E-04

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
2351	2000000	6	100000	10	20000	0.006585	0.005293	0.004549	0.00389	0.002831	-5.72E-05	1.68E-04
2352	2000000	6	100000	10	50000	0.004011	0.002866	0.002283	0.00182	0.001178	-5.22E-05	1.05E-04
2353	2000000	6	100000	12	5000	0.01354	0.0121	0.01117	0.01026	0.008569	-6.18E-05	2.50E-04
2354	2000000	6	100000	12	10000	0.00919	0.007846	0.007033	0.00628	0.004968	-5.86E-05	1.97E-04
2355	2000000	6	100000	12	20000	0.006272	0.005023	0.004322	0.00371	0.002735	-5.54E-05	1.49E-04
2356	2000000	6	100000	12	50000	0.003921	0.002792	0.002226	0.00178	0.001163	-5.15E-05	9.25E-05
2357	2000000	6	100000	14	5000	0.01248	0.01111	0.01025	0.00944	0.007932	-5.89E-05	2.21E-04
2358	2000000	6	100000	14	10000	0.008632	0.007338	0.006581	0.00589	0.004703	-5.65E-05	1.74E-04
2359	2000000	6	100000	14	20000	0.005992	0.004778	0.004112	0.00354	0.002637	-5.41E-05	1.32E-04
2360	2000000	6	100000	14	50000	0.003841	0.002725	0.002172	0.00174	0.001147	-5.1E-05	8.19E-05
2361	2000000	6	125000	6	5000	0.01682	0.01512	0.0139	0.01266	0.01028	-7.21E-05	3.50E-04
2362	2000000	6	125000	6	10000	0.01094	0.009413	0.008402	0.00742	0.005669	-6.57E-05	2.78E-04
2363	2000000	6	125000	6	20000	0.007123	0.005764	0.004943	0.0042	0.002984	-5.93E-05	2.13E-04
2364	2000000	6	125000	6	50000	0.004099	0.002951	0.002354	0.00187	0.001198	-5.15E-05	1.39E-04
2365	2000000	6	125000	8	5000	0.01536	0.01381	0.01275	0.01167	0.009623	-6.53E-05	3.05E-04
2366	2000000	6	125000	8	10000	0.01012	0.008707	0.007806	0.00694	0.005405	-6.05E-05	2.42E-04
2367	2000000	6	125000	8	20000	0.00669	0.005408	0.00466	0.00399	0.002893	-5.58E-05	1.86E-04
2368	2000000	6	125000	8	50000	0.003954	0.002841	0.002275	0.00182	0.001185	-4.99E-05	1.20E-04
2369	2000000	6	125000	10	5000	0.014	0.01257	0.01163	0.0107	0.008927	-6.03E-05	2.65E-04
2370	2000000	6	125000	10	10000	0.009377	0.00805	0.007239	0.00647	0.00512	-5.67E-05	2.10E-04
2371	2000000	6	125000	10	20000	0.006299	0.005079	0.00439	0.00378	0.002791	-5.32E-05	1.62E-04
2372	2000000	6	125000	10	50000	0.003824	0.002738	0.002198	0.00177	0.001169	-4.88E-05	1.04E-04
2373	2000000	6	125000	12	5000	0.01277	0.01143	0.01058	0.00977	0.008227	-5.65E-05	2.31E-04
2374	2000000	6	125000	12	10000	0.008712	0.007453	0.006713	0.00603	0.004828	-5.39E-05	1.84E-04
2375	2000000	6	125000	12	20000	0.005954	0.00478	0.004139	0.00358	0.002682	-5.13E-05	1.41E-04
2376	2000000	6	125000	12	50000	0.003709	0.002645	0.002126	0.00172	0.001149	-4.79E-05	9.08E-05
2377	2000000	6	125000	14	5000	0.01166	0.01039	0.009624	0.0089	0.007544	-5.37E-05	2.02E-04
2378	2000000	6	125000	14	10000	0.008121	0.006916	0.006232	0.00561	0.004539	-5.18E-05	1.61E-04
2379	2000000	6	125000	14	20000	0.005649	0.004513	0.003909	0.00339	0.002572	-4.98E-05	1.24E-04
2380	2000000	6	125000	14	50000	0.003608	0.002561	0.002058	0.00167	0.001127	-4.72E-05	7.99E-05
2381	2000000	6	150000	6	5000	0.01639	0.01476	0.01361	0.01242	0.01014	-6.81E-05	3.36E-04
2382	2000000	6	150000	6	10000	0.01068	0.00921	0.008244	0.0073	0.00562	-6.22E-05	2.68E-04
2383	2000000	6	150000	6	20000	0.006958	0.005647	0.00486	0.00414	0.00297	-5.63E-05	2.08E-04
2384	2000000	6	150000	6	50000	0.003997	0.002887	0.002316	0.00185	0.001197	-4.91E-05	1.38E-04
2385	2000000	6	150000	8	5000	0.01483	0.01336	0.01236	0.01136	0.009424	-6.1E-05	2.89E-04
2386	2000000	6	150000	8	10000	0.009798	0.008449	0.007601	0.00679	0.005329	-5.67E-05	2.31E-04
2387	2000000	6	150000	8	20000	0.006482	0.005256	0.00455	0.00391	0.002869	-5.25E-05	1.79E-04
2388	2000000	6	150000	8	50000	0.003824	0.002757	0.002222	0.00179	0.001182	-4.72E-05	1.18E-04
2389	2000000	6	150000	10	5000	0.01341	0.01205	0.01118	0.01032	0.008675	-5.58E-05	2.49E-04
2390	2000000	6	150000	10	10000	0.009009	0.007752	0.006998	0.00629	0.00502	-5.28E-05	1.99E-04
2391	2000000	6	150000	10	20000	0.00606	0.0049	0.004257	0.00369	0.002756	-4.97E-05	1.55E-04
2392	2000000	6	150000	10	50000	0.003673	0.002637	0.002132	0.00173	0.001162	-4.58E-05	1.02E-04
2393	2000000	6	150000	12	5000	0.01213	0.01087	0.0101	0.00935	0.007932	-5.21E-05	2.15E-04
2394	2000000	6	150000	12	10000	0.008314	0.007128	0.006446	0.00582	0.004707	-4.99E-05	1.73E-04
2395	2000000	6	150000	12	20000	0.005691	0.004581	0.003988	0.00347	0.002637	-4.77E-05	1.34E-04
2396	2000000	6	150000	12	50000	0.00354	0.00253	0.002048	0.00167	0.001139	-4.48E-05	8.86E-05
2397	2000000	6	150000	14	5000	0.011	0.009803	0.009106	0.00845	0.007214	-4.94E-05	1.87E-04
2398	2000000	6	150000	14	10000	0.007704	0.006571	0.005946	0.00538	0.004399	-4.79E-05	1.50E-04
2399	2000000	6	150000	14	20000	0.00537	0.004298	0.003745	0.00327	0.002516	-4.63E-05	1.17E-04
2400	2000000	6	150000	14	50000	0.003424	0.002433	0.00197	0.00161	0.001113	-4.41E-05	7.75E-05

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
2401	2000000	8	50000	6	5000	0.01393	0.01277	0.01194	0.01107	0.009303	-5.9E-05	2.47E-04
2402	2000000	8	50000	6	10000	0.009133	0.008078	0.00738	0.00667	0.005327	-5.34E-05	1.91E-04
2403	2000000	8	50000	6	20000	0.006007	0.005051	0.004468	0.00391	0.002922	-4.81E-05	1.41E-04
2404	2000000	8	50000	6	50000	0.00356	0.002721	0.002269	0.00187	0.001254	-4.21E-05	8.42E-05
2405	2000000	8	50000	8	5000	0.01342	0.0123	0.01151	0.01068	0.009002	-5.7E-05	2.32E-04
2406	2000000	8	50000	8	10000	0.008863	0.007833	0.00716	0.00648	0.005196	-5.19E-05	1.78E-04
2407	2000000	8	50000	8	20000	0.005885	0.004944	0.004376	0.00383	0.002876	-4.73E-05	1.29E-04
2408	2000000	8	50000	8	50000	0.003562	0.002723	0.002272	0.00187	0.001257	-4.21E-05	7.54E-05
2409	2000000	8	50000	10	5000	0.0129	0.0118	0.011	0.0103	0.00867	-5.51E-05	2.17E-04
2410	2000000	8	50000	10	10000	0.00859	0.00758	0.00693	0.00628	0.00505	-5.06E-05	1.65E-04
2411	2000000	8	50000	10	20000	0.00577	0.00484	0.00428	0.00375	0.00283	-4.66E-05	1.19E-04
2412	2000000	8	50000	10	50000	0.00356	0.00273	0.00227	0.00188	0.00126	-4.21E-05	6.81E-05
2413	2000000	8	50000	12	5000	0.0123	0.0113	0.0106	0.0098	0.00831	-5.34E-05	2.02E-04
2414	2000000	8	50000	12	10000	0.00832	0.00733	0.0067	0.00607	0.0049	-4.95E-05	1.53E-04
2415	2000000	8	50000	12	20000	0.00565	0.00473	0.00419	0.00367	0.00277	-0.000046	1.09E-04
2416	2000000	8	50000	12	50000	0.00357	0.00273	0.00228	0.00188	0.00126	-4.21E-05	6.19E-05
2417	2000000	8	50000	14	5000	0.0118	0.0107	0.0101	0.00934	0.00793	-0.000052	1.88E-04
2418	2000000	8	50000	14	10000	0.00805	0.00708	0.00647	0.00586	0.00475	-4.85E-05	1.41E-04
2419	2000000	8	50000	14	20000	0.00554	0.00463	0.0041	0.00359	0.00272	-4.54E-05	1.00E-04
2420	2000000	8	50000	14	50000	0.00357	0.00273	0.00228	0.00188	0.00126	-0.000042	5.65E-05
2421	2000000	8	75000	6	5000	0.0136	0.0125	0.0117	0.0108	0.00915	-5.62E-05	2.41E-04
2422	2000000	8	75000	6	10000	0.00892	0.00789	0.00722	0.00654	0.00525	-5.09E-05	1.89E-04
2423	2000000	8	75000	6	20000	0.00585	0.00492	0.00436	0.00383	0.00288	-4.59E-05	1.43E-04
2424	2000000	8	75000	6	50000	0.003424	0.002613	0.002186	0.00181	0.001227	-4E-05	9.00E-05
2425	2000000	8	75000	8	5000	0.01294	0.01186	0.01112	0.01034	0.008761	-5.35E-05	2.23E-04
2426	2000000	8	75000	8	10000	0.008557	0.007568	0.006934	0.00629	0.005083	-4.89E-05	1.74E-04
2427	2000000	8	75000	8	20000	0.005667	0.004762	0.004227	0.00371	0.002815	-4.46E-05	1.30E-04
2428	2000000	8	75000	8	50000	0.003384	0.00258	0.002159	0.00179	0.001219	-3.96E-05	8.03E-05
2429	2000000	8	75000	10	5000	0.01225	0.01122	0.01052	0.00979	0.008334	-5.11E-05	2.06E-04
2430	2000000	8	75000	10	10000	0.008196	0.007237	0.006635	0.00603	0.004898	-4.71E-05	1.59E-04
2431	2000000	8	75000	10	20000	0.005491	0.004605	0.004089	0.0036	0.002745	-4.35E-05	1.18E-04
2432	2000000	8	75000	10	50000	0.003347	0.002548	0.002133	0.00177	0.001209	-3.93E-05	7.20E-05
2433	2000000	8	75000	12	5000	0.01157	0.01057	0.00991	0.00923	0.007882	-4.9E-05	1.89E-04
2434	2000000	8	75000	12	10000	0.007843	0.006909	0.006335	0.00577	0.004704	-4.57E-05	1.46E-04
2435	2000000	8	75000	12	20000	0.005322	0.004453	0.003954	0.00349	0.002671	-4.26E-05	1.08E-04
2436	2000000	8	75000	12	50000	0.003312	0.002518	0.002107	0.00175	0.001199	-3.9E-05	6.50E-05
2437	2000000	8	75000	14	5000	0.0109	0.009926	0.009305	0.00867	0.007419	-4.73E-05	1.73E-04
2438	2000000	8	75000	14	10000	0.007504	0.006592	0.006042	0.0055	0.004506	-4.44E-05	1.34E-04
2439	2000000	8	75000	14	20000	0.005163	0.004307	0.003824	0.00337	0.002595	-4.18E-05	9.84E-05
2440	2000000	8	75000	14	50000	0.003279	0.002489	0.002083	0.00173	0.001188	-3.88E-05	5.89E-05
2441	2000000	8	100000	6	5000	0.01329	0.0122	0.01145	0.01064	0.009006	-5.37E-05	2.34E-04
2442	2000000	8	100000	6	10000	0.008731	0.007737	0.007093	0.00644	0.005191	-4.87E-05	1.85E-04
2443	2000000	8	100000	6	20000	0.005723	0.004821	0.004283	0.00377	0.002853	-4.4E-05	1.43E-04
2444	2000000	8	100000	6	50000	0.003331	0.002543	0.002133	0.00177	0.001213	-3.82E-05	9.26E-05
2445	2000000	8	100000	8	5000	0.01252	0.01148	0.01078	0.01004	0.008549	-5.04E-05	2.14E-04
2446	2000000	8	100000	8	10000	0.008301	0.007348	0.006747	0.00614	0.00499	-4.62E-05	1.69E-04
2447	2000000	8	100000	8	20000	0.005497	0.004623	0.004114	0.00363	0.002773	-4.23E-05	1.29E-04
2448	2000000	8	100000	8	50000	0.003263	0.002486	0.002088	0.00174	0.001199	-3.75E-05	8.21E-05
2449	2000000	8	100000	10	5000	0.01172	0.01073	0.01008	0.00941	0.00805	-4.76E-05	1.95E-04
2450	2000000	8	100000	10	10000	0.007876	0.006959	0.006395	0.00583	0.004773	-4.42E-05	1.53E-04

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
2451	2000000	8	100000	10	20000	0.00528	0.00443	0.003946	0.00349	0.002687	-4.09E-05	1.16E-04
2452	2000000	8	100000	10	50000	0.003198	0.002431	0.002043	0.00171	0.001182	-3.7E-05	7.32E-05
2453	2000000	8	100000	12	5000	0.01094	0.009991	0.009386	0.00876	0.007528	-4.53E-05	1.77E-04
2454	2000000	8	100000	12	10000	0.007467	0.006579	0.006048	0.00552	0.004546	-4.25E-05	1.38E-04
2455	2000000	8	100000	12	20000	0.005075	0.004245	0.003782	0.00335	0.002597	-3.98E-05	1.05E-04
2456	2000000	8	100000	12	50000	0.003139	0.00238	0.002	0.00167	0.001165	-3.65E-05	6.57E-05
2457	2000000	8	100000	14	5000	0.01019	0.009273	0.008706	0.00813	0.007003	-4.35E-05	1.60E-04
2458	2000000	8	100000	14	10000	0.007079	0.006216	0.005713	0.00522	0.004317	-4.11E-05	1.26E-04
2459	2000000	8	100000	14	20000	0.004884	0.004071	0.003626	0.00321	0.002506	-3.89E-05	9.46E-05
2460	2000000	8	100000	14	50000	0.003084	0.002332	0.001958	0.00164	0.001147	-3.62E-05	5.92E-05
2461	2000000	8	125000	6	5000	0.01302	0.01196	0.01123	0.01045	0.008876	-5.13E-05	2.27E-04
2462	2000000	8	125000	6	10000	0.008565	0.007597	0.006975	0.00634	0.005136	-4.67E-05	1.81E-04
2463	2000000	8	125000	6	20000	0.005615	0.004735	0.004216	0.00372	0.00283	-4.22E-05	1.41E-04
2464	2000000	8	125000	6	50000	0.003259	0.002489	0.002094	0.00175	0.001205	-3.67E-05	9.36E-05
2465	2000000	8	125000	8	5000	0.01214	0.01114	0.01048	0.00978	0.008358	-4.77E-05	2.06E-04
2466	2000000	8	125000	8	10000	0.008078	0.007157	0.006584	0.00601	0.004909	-4.38E-05	1.63E-04
2467	2000000	8	125000	8	20000	0.005353	0.004506	0.004021	0.00356	0.002738	-4.02E-05	1.26E-04
2468	2000000	8	125000	8	50000	0.003168	0.002414	0.002034	0.0017	0.001186	-3.58E-05	8.25E-05
2469	2000000	8	125000	10	5000	0.01126	0.01031	0.009705	0.00907	0.007798	-4.47E-05	1.85E-04
2470	2000000	8	125000	10	10000	0.007603	0.006721	0.006191	0.00566	0.004664	-4.16E-05	1.47E-04
2471	2000000	8	125000	10	20000	0.005104	0.004285	0.003828	0.0034	0.00264	-3.86E-05	1.13E-04
2472	2000000	8	125000	10	50000	0.003083	0.002343	0.001976	0.00166	0.001164	-3.5E-05	7.32E-05
2473	2000000	8	125000	12	5000	0.01041	0.009504	0.008942	0.00837	0.007223	-4.22E-05	1.66E-04
2474	2000000	8	125000	12	10000	0.007152	0.006303	0.005808	0.00532	0.004412	-3.97E-05	1.32E-04
2475	2000000	8	125000	12	20000	0.004872	0.004076	0.003644	0.00324	0.002538	-3.74E-05	1.01E-04
2476	2000000	8	125000	12	50000	0.003006	0.002276	0.00192	0.00161	0.001142	-3.45E-05	6.53E-05
2477	2000000	8	125000	14	5000	0.0096	0.008732	0.00821	0.00768	0.006651	-4.03E-05	1.49E-04
2478	2000000	8	125000	14	10000	0.006731	0.005908	0.005442	0.00499	0.004159	-3.83E-05	1.18E-04
2479	2000000	8	125000	14	20000	0.004659	0.003881	0.003469	0.00309	0.002435	-3.64E-05	9.06E-05
2480	2000000	8	125000	14	50000	0.002936	0.002214	0.001867	0.00157	0.001118	-3.4E-05	5.85E-05
2481	2000000	8	150000	6	5000	0.01277	0.01174	0.01103	0.01028	0.008754	-4.92E-05	2.21E-04
2482	2000000	8	150000	6	10000	0.008414	0.007469	0.006868	0.00626	0.005086	-4.48E-05	1.77E-04
2483	2000000	8	150000	6	20000	0.005519	0.004659	0.004156	0.00367	0.00281	-4.06E-05	1.39E-04
2484	2000000	8	150000	6	50000	0.003199	0.002446	0.002063	0.00173	0.001199	-3.53E-05	9.37E-05
2485	2000000	8	150000	8	5000	0.01181	0.01084	0.01021	0.00954	0.008183	-4.52E-05	1.98E-04
2486	2000000	8	150000	8	10000	0.007879	0.006986	0.006438	0.00589	0.004835	-4.17E-05	1.58E-04
2487	2000000	8	150000	8	20000	0.005227	0.004404	0.003939	0.0035	0.002709	-3.83E-05	1.23E-04
2488	2000000	8	150000	8	50000	0.003089	0.002356	0.001992	0.00167	0.001176	-3.42E-05	8.22E-05
2489	2000000	8	150000	10	5000	0.01086	0.009947	0.009371	0.00878	0.007573	-4.2E-05	1.76E-04
2490	2000000	8	150000	10	10000	0.007364	0.006514	0.006012	0.00551	0.004568	-3.93E-05	1.41E-04
2491	2000000	8	150000	10	20000	0.004953	0.004161	0.003728	0.00332	0.0026	-3.66E-05	1.09E-04
2492	2000000	8	150000	10	50000	0.002989	0.002271	0.001922	0.00162	0.001151	-3.33E-05	7.25E-05
2493	2000000	8	150000	12	5000	0.00995	0.009084	0.008558	0.00802	0.006954	-3.95E-05	1.57E-04
2494	2000000	8	150000	12	10000	0.006882	0.006066	0.005601	0.00515	0.004294	-3.74E-05	1.25E-04
2495	2000000	8	150000	12	20000	0.004701	0.003934	0.003527	0.00315	0.002488	-3.53E-05	9.71E-05
2496	2000000	8	150000	12	50000	0.002898	0.002193	0.001857	0.00157	0.001124	-3.27E-05	6.43E-05
2497	2000000	8	150000	14	5000	0.009102	0.008273	0.007788	0.0073	0.006348	-3.76E-05	1.40E-04
2498	2000000	8	150000	14	10000	0.006435	0.005647	0.005213	0.0048	0.004022	-3.59E-05	1.12E-04
2499	2000000	8	150000	14	20000	0.004471	0.003724	0.003338	0.00299	0.002375	-3.42E-05	8.68E-05
2500	2000000	8	150000	14	50000	0.002816	0.002121	0.001795	0.00152	0.001096	-3.22E-05	5.74E-05

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
2501	2000000	10	50000	6	5000	0.01092	0.01012	0.009595	0.00903	0.007838	-4.22E-05	1.69E-04
2502	2000000	10	50000	6	10000	0.007305	0.006565	0.006117	0.00565	0.004718	-3.82E-05	1.31E-04
2503	2000000	10	50000	6	20000	0.004854	0.00417	0.003788	0.00341	0.002698	-3.45E-05	9.82E-05
2504	2000000	10	50000	6	50000	0.002903	0.002285	0.00198	0.0017	0.001223	-3.02E-05	6.00E-05
2505	2000000	10	50000	8	5000	0.0106	0.009811	0.009306	0.00876	0.007613	-4.11E-05	1.61E-04
2506	2000000	10	50000	8	10000	0.007134	0.006405	0.005968	0.00551	0.004614	-3.74E-05	1.24E-04
2507	2000000	10	50000	8	20000	0.004776	0.004099	0.003724	0.00335	0.002659	-0.000034	9.11E-05
2508	2000000	10	50000	8	50000	0.002905	0.002287	0.001982	0.0017	0.001225	-3.02E-05	5.42E-05
2509	2000000	10	50000	10	5000	0.01025	0.009476	0.008987	0.00846	0.007361	-4E-05	1.53E-04
2510	2000000	10	50000	10	10000	0.006954	0.006236	0.005811	0.00537	0.0045	-3.66E-05	1.17E-04
2511	2000000	10	50000	10	20000	0.004697	0.004026	0.003658	0.00329	0.002617	-3.36E-05	8.46E-05
2512	2000000	10	50000	10	50000	0.002906	0.002288	0.001983	0.0017	0.001227	-3.02E-05	4.94E-05
2513	2000000	10	50000	12	5000	0.009879	0.009122	0.008648	0.00814	0.007088	-3.91E-05	1.45E-04
2514	2000000	10	50000	12	10000	0.006771	0.006062	0.005647	0.00522	0.004379	-3.6E-05	1.10E-04
2515	2000000	10	50000	12	20000	0.004619	0.003953	0.003591	0.00323	0.002573	-3.32E-05	7.88E-05
2516	2000000	10	50000	12	50000	0.002907	0.00229	0.001985	0.0017	0.001228	-3.02E-05	4.54E-05
2517	2000000	10	50000	14	5000	0.009501	0.008756	0.008297	0.00781	0.006801	-3.82E-05	1.37E-04
2518	2000000	10	50000	14	10000	0.006587	0.005886	0.005481	0.00507	0.004253	-3.54E-05	1.03E-04
2519	2000000	10	50000	14	20000	0.004543	0.003881	0.003524	0.00317	0.002527	-3.29E-05	7.35E-05
2520	2000000	10	50000	14	50000	0.002908	0.00229	0.001986	0.0017	0.001229	-3.02E-05	4.19E-05
2521	2000000	10	75000	6	5000	0.01071	0.009921	0.009416	0.00887	0.007712	-4.07E-05	1.66E-04
2522	2000000	10	75000	6	10000	0.007171	0.006446	0.006011	0.00556	0.004654	-3.68E-05	1.31E-04
2523	2000000	10	75000	6	20000	0.004755	0.004084	0.003715	0.00335	0.00266	-3.32E-05	1.00E-04
2524	2000000	10	75000	6	50000	0.002814	0.00221	0.001917	0.00165	0.001195	-2.9E-05	6.44E-05
2525	2000000	10	75000	8	5000	0.01028	0.00952	0.009037	0.00852	0.00742	-3.91E-05	1.57E-04
2526	2000000	10	75000	8	10000	0.006941	0.006231	0.005814	0.00538	0.004518	-3.56E-05	1.23E-04
2527	2000000	10	75000	8	20000	0.004638	0.003978	0.003619	0.00326	0.002603	-3.24E-05	9.26E-05
2528	2000000	10	75000	8	50000	0.002788	0.002187	0.001898	0.00163	0.001186	-2.87E-05	5.81E-05
2529	2000000	10	75000	10	5000	0.00983	0.009085	0.008624	0.00813	0.007095	-3.77E-05	1.47E-04
2530	2000000	10	75000	10	10000	0.006702	0.006006	0.005604	0.00519	0.004369	-3.46E-05	1.14E-04
2531	2000000	10	75000	10	20000	0.004521	0.00387	0.003522	0.00318	0.002543	-3.18E-05	8.54E-05
2532	2000000	10	75000	10	50000	0.002762	0.002164	0.001878	0.00162	0.001177	-2.85E-05	5.27E-05
2533	2000000	10	75000	12	5000	0.009359	0.008632	0.00819	0.00772	0.006745	-3.64E-05	1.38E-04
2534	2000000	10	75000	12	10000	0.00646	0.005777	0.005389	0.00499	0.004211	-3.37E-05	1.06E-04
2535	2000000	10	75000	12	20000	0.004406	0.003763	0.003424	0.00309	0.002479	-3.12E-05	7.89E-05
2536	2000000	10	75000	12	50000	0.002738	0.002143	0.001859	0.0016	0.001167	-2.83E-05	4.82E-05
2537	2000000	10	75000	14	5000	0.008883	0.008172	0.007748	0.0073	0.006383	-3.53E-05	1.28E-04
2538	2000000	10	75000	14	10000	0.00622	0.005548	0.005173	0.00479	0.004048	-3.29E-05	9.90E-05
2539	2000000	10	75000	14	20000	0.004294	0.003658	0.003327	0.003	0.002414	-3.07E-05	7.31E-05
2540	2000000	10	75000	14	50000	0.002715	0.002121	0.00184	0.00158	0.001157	-2.82E-05	4.42E-05
2541	2000000	10	100000	6	5000	0.01051	0.009743	0.009253	0.00872	0.007597	-3.92E-05	1.62E-04
2542	2000000	10	100000	6	10000	0.007055	0.006343	0.005921	0.00548	0.004601	-3.55E-05	1.30E-04
2543	2000000	10	100000	6	20000	0.004676	0.004017	0.003658	0.0033	0.002633	-3.21E-05	1.01E-04
2544	2000000	10	100000	6	50000	0.002754	0.002161	0.001877	0.00162	0.001179	-2.79E-05	6.65E-05
2545	2000000	10	100000	8	5000	0.01001	0.009261	0.008798	0.0083	0.007247	-3.73E-05	1.52E-04
2546	2000000	10	100000	8	10000	0.006777	0.006084	0.005682	0.00527	0.004438	-3.41E-05	1.20E-04
2547	2000000	10	100000	8	20000	0.004529	0.003884	0.003539	0.0032	0.002563	-3.1E-05	9.21E-05
2548	2000000	10	100000	8	50000	0.002708	0.002121	0.001843	0.00159	0.001164	-2.75E-05	5.98E-05
2549	2000000	10	100000	10	5000	0.009467	0.008745	0.008307	0.00784	0.006861	-3.56E-05	1.41E-04
2550	2000000	10	100000	10	10000	0.006491	0.005815	0.005432	0.00504	0.00426	-3.28E-05	1.11E-04

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
2551	2000000	10	100000	10	20000	0.004383	0.00375	0.003418	0.00309	0.002488	-3.02E-05	8.44E-05
2552	2000000	10	100000	10	50000	0.002664	0.002082	0.00181	0.00156	0.001148	-2.71E-05	5.40E-05
2553	2000000	10	100000	12	5000	0.008916	0.008215	0.007801	0.00736	0.006452	-3.42E-05	1.31E-04
2554	2000000	10	100000	12	10000	0.006204	0.005543	0.005177	0.00481	0.004073	-3.17E-05	1.02E-04
2555	2000000	10	100000	12	20000	0.004241	0.003618	0.003297	0.00299	0.00241	-2.95E-05	7.75E-05
2556	2000000	10	100000	12	50000	0.002622	0.002044	0.001777	0.00153	0.001131	-2.68E-05	4.91E-05
2557	2000000	10	100000	14	5000	0.00837	0.007687	0.007293	0.00688	0.006034	-3.29E-05	1.20E-04
2558	2000000	10	100000	14	10000	0.005922	0.005275	0.004924	0.00457	0.003881	-3.08E-05	9.45E-05
2559	2000000	10	100000	14	20000	0.004104	0.00349	0.003179	0.00288	0.002331	-2.89E-05	7.12E-05
2560	2000000	10	100000	14	50000	0.002583	0.002009	0.001745	0.00151	0.001113	-2.66E-05	4.48E-05
2561	2000000	10	125000	6	5000	0.01033	0.009578	0.0091	0.00858	0.007489	-3.79E-05	1.59E-04
2562	2000000	10	125000	6	10000	0.00695	0.00625	0.005838	0.00541	0.004553	-3.43E-05	1.27E-04
2563	2000000	10	125000	6	20000	0.004608	0.00396	0.00361	0.00326	0.00261	-3.1E-05	9.98E-05
2564	2000000	10	125000	6	50000	0.002707	0.002123	0.001848	0.00159	0.001169	-2.7E-05	6.74E-05
2565	2000000	10	125000	8	5000	0.009752	0.009025	0.008579	0.0081	0.007088	-3.57E-05	1.47E-04
2566	2000000	10	125000	8	10000	0.00663	0.005953	0.005565	0.00516	0.004367	-3.26E-05	1.17E-04
2567	2000000	10	125000	8	20000	0.004436	0.003804	0.003471	0.00314	0.00253	-2.98E-05	9.09E-05
2568	2000000	10	125000	8	50000	0.002645	0.00207	0.001803	0.00156	0.001149	-2.64E-05	6.04E-05
2569	2000000	10	125000	10	5000	0.009143	0.008443	0.008025	0.00758	0.00665	-3.38E-05	1.35E-04
2570	2000000	10	125000	10	10000	0.006305	0.005647	0.005281	0.00491	0.004165	-3.12E-05	1.08E-04
2571	2000000	10	125000	10	20000	0.004266	0.003649	0.003331	0.00302	0.002444	-2.88E-05	8.28E-05
2572	2000000	10	125000	10	50000	0.002587	0.002018	0.001758	0.00152	0.001127	-2.59E-05	5.44E-05
2573	2000000	10	125000	12	5000	0.008531	0.007853	0.007461	0.00705	0.006193	-3.22E-05	1.24E-04
2574	2000000	10	125000	12	10000	0.005983	0.005342	0.004995	0.00464	0.003954	-0.00003	9.84E-05
2575	2000000	10	125000	12	20000	0.004103	0.003497	0.003193	0.0029	0.002354	-2.8E-05	7.55E-05
2576	2000000	10	125000	12	50000	0.002532	0.001969	0.001715	0.00149	0.001105	-2.55E-05	4.92E-05
2577	2000000	10	125000	14	5000	0.007932	0.007274	0.006905	0.00652	0.005734	-3.08E-05	1.13E-04
2578	2000000	10	125000	14	10000	0.00567	0.005043	0.004713	0.00438	0.003739	-0.000029	9.01E-05
2579	2000000	10	125000	14	20000	0.003947	0.003351	0.003058	0.00278	0.002264	-2.73E-05	6.90E-05
2580	2000000	10	125000	14	50000	0.002481	0.001923	0.001674	0.00145	0.001083	-2.52E-05	4.47E-05
2581	2000000	10	150000	6	5000	0.01016	0.009422	0.008957	0.00845	0.007387	-3.66E-05	1.56E-04
2582	2000000	10	150000	6	10000	0.006852	0.006163	0.005762	0.00534	0.004508	-3.32E-05	1.25E-04
2583	2000000	10	150000	6	20000	0.004547	0.003908	0.003567	0.00323	0.00259	-3E-05	9.87E-05
2584	2000000	10	150000	6	50000	0.002668	0.002092	0.001823	0.00158	0.001161	-2.61E-05	6.78E-05
2585	2000000	10	150000	8	5000	0.009519	0.008808	0.008378	0.00792	0.006941	-3.42E-05	1.43E-04
2586	2000000	10	150000	8	10000	0.006497	0.005833	0.005459	0.00507	0.004301	-3.13E-05	1.14E-04
2587	2000000	10	150000	8	20000	0.004353	0.003733	0.003411	0.00309	0.002501	-2.86E-05	8.94E-05
2588	2000000	10	150000	8	50000	0.002593	0.002028	0.001769	0.00153	0.001137	-2.54E-05	6.05E-05
2589	2000000	10	150000	10	5000	0.008852	0.008169	0.00777	0.00735	0.006459	-3.22E-05	1.30E-04
2590	2000000	10	150000	10	10000	0.006138	0.005496	0.005146	0.00479	0.004078	-2.98E-05	1.04E-04
2591	2000000	10	150000	10	20000	0.004164	0.00356	0.003255	0.00296	0.002405	-2.75E-05	8.09E-05
2592	2000000	10	150000	10	50000	0.002523	0.001966	0.001716	0.00149	0.001112	-2.48E-05	5.42E-05
2593	2000000	10	150000	12	5000	0.00819	0.007532	0.00716	0.00677	0.005963	-3.05E-05	1.18E-04
2594	2000000	10	150000	12	10000	0.005787	0.005164	0.004834	0.0045	0.003847	-2.85E-05	9.46E-05
2595	2000000	10	150000	12	20000	0.003983	0.003393	0.003102	0.00282	0.002306	-2.66E-05	7.33E-05
2596	2000000	10	150000	12	50000	0.002458	0.001908	0.001665	0.00145	0.001086	-2.44E-05	4.88E-05
2597	2000000	10	150000	14	5000	0.007553	0.006916	0.006568	0.00621	0.005472	-2.9E-05	1.07E-04
2598	2000000	10	150000	14	10000	0.00545	0.004842	0.00453	0.00422	0.003614	-2.74E-05	8.61E-05
2599	2000000	10	150000	14	20000	0.003813	0.003233	0.002955	0.00269	0.002206	-2.59E-05	6.66E-05
2600	2000000	10	150000	14	50000	0.002397	0.001853	0.001617	0.00141	0.001059	-0.000024	4.41E-05

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
2601	2000000	12	50000	6	5000	0.0087	0.008083	0.007726	0.00734	0.00649	-3.16E-05	1.22E-04
2602	2000000	12	50000	6	10000	0.006011	0.005432	0.005122	0.00479	0.00412	-2.86E-05	9.63E-05
2603	2000000	12	50000	6	20000	0.004059	0.003516	0.003248	0.00298	0.002451	-2.58E-05	7.26E-05
2604	2000000	12	50000	6	50000	0.002457	0.001955	0.001736	0.00153	0.001162	-2.26E-05	4.51E-05
2605	2000000	12	50000	8	5000	0.008481	0.007872	0.007524	0.00714	0.006322	-3.09E-05	1.18E-04
2606	2000000	12	50000	8	10000	0.005892	0.005319	0.005015	0.00469	0.004037	-2.8E-05	9.17E-05
2607	2000000	12	50000	8	20000	0.004004	0.003465	0.003201	0.00293	0.002418	-2.55E-05	6.80E-05
2608	2000000	12	50000	8	50000	0.002458	0.001956	0.001737	0.00153	0.001163	-2.26E-05	4.11E-05
2609	2000000	12	50000	10	5000	0.008241	0.007639	0.007299	0.00693	0.006134	-3.03E-05	1.13E-04
2610	2000000	12	50000	10	10000	0.005765	0.005197	0.004899	0.00459	0.003947	-2.76E-05	8.71E-05
2611	2000000	12	50000	10	20000	0.003949	0.003412	0.003152	0.00289	0.002383	-2.52E-05	6.37E-05
2612	2000000	12	50000	10	50000	0.002459	0.001957	0.001738	0.00153	0.001164	-2.26E-05	3.77E-05
2613	2000000	12	50000	12	5000	0.007984	0.007389	0.007058	0.0067	0.00593	-2.96E-05	1.08E-04
2614	2000000	12	50000	12	10000	0.005633	0.005071	0.004779	0.00447	0.00385	-2.71E-05	8.27E-05
2615	2000000	12	50000	12	20000	0.003892	0.003359	0.003101	0.00284	0.002346	-2.49E-05	5.98E-05
2616	2000000	12	50000	12	50000	0.00246	0.001958	0.00174	0.00153	0.001165	-2.26E-05	3.48E-05
2617	2000000	12	50000	14	5000	0.007716	0.007128	0.006804	0.00646	0.005714	-2.9E-05	1.03E-04
2618	2000000	12	50000	14	10000	0.005499	0.004941	0.004654	0.00436	0.003749	-2.68E-05	7.84E-05
2619	2000000	12	50000	14	20000	0.003836	0.003305	0.003051	0.0028	0.002308	-2.47E-05	5.63E-05
2620	2000000	12	50000	14	50000	0.002461	0.001959	0.00174	0.00153	0.001166	-2.25E-05	3.24E-05
2621	2000000	12	75000	6	5000	0.008553	0.007944	0.007596	0.00721	0.006389	-3.07E-05	1.21E-04
2622	2000000	12	75000	6	10000	0.005919	0.005348	0.005045	0.00473	0.004067	-2.77E-05	9.65E-05
2623	2000000	12	75000	6	20000	0.003991	0.003455	0.003194	0.00293	0.002418	-2.49E-05	7.44E-05
2624	2000000	12	75000	6	50000	0.002394	0.0019	0.001688	0.00149	0.001135	-2.18E-05	4.85E-05
2625	2000000	12	75000	8	5000	0.008263	0.007665	0.007328	0.00696	0.006169	-2.97E-05	1.16E-04
2626	2000000	12	75000	8	10000	0.005759	0.005195	0.004901	0.00459	0.003958	-2.7E-05	9.13E-05
2627	2000000	12	75000	8	20000	0.00391	0.003379	0.003124	0.00287	0.00237	-2.44E-05	6.94E-05
2628	2000000	12	75000	8	50000	0.002376	0.001883	0.001673	0.00148	0.001127	-2.16E-05	4.41E-05
2629	2000000	12	75000	10	5000	0.007946	0.007358	0.007033	0.00668	0.005924	-2.88E-05	1.10E-04
2630	2000000	12	75000	10	10000	0.005588	0.005033	0.004747	0.00445	0.003838	-2.63E-05	8.61E-05
2631	2000000	12	75000	10	20000	0.003826	0.0033	0.003051	0.0028	0.002319	-2.4E-05	6.47E-05
2632	2000000	12	75000	10	50000	0.002357	0.001866	0.001658	0.00146	0.001118	-2.14E-05	4.04E-05
2633	2000000	12	75000	12	5000	0.007612	0.007033	0.006719	0.00638	0.005659	-2.8E-05	1.04E-04
2634	2000000	12	75000	12	10000	0.005412	0.004863	0.004586	0.0043	0.00371	-2.57E-05	8.11E-05
2635	2000000	12	75000	12	20000	0.003742	0.003221	0.002977	0.00273	0.002265	-2.36E-05	6.04E-05
2636	2000000	12	75000	12	50000	0.00234	0.00185	0.001643	0.00145	0.001109	-2.13E-05	3.72E-05
2637	2000000	12	75000	14	5000	0.007268	0.006699	0.006395	0.00607	0.005382	-2.72E-05	9.79E-05
2638	2000000	12	75000	14	10000	0.005234	0.004691	0.004421	0.00414	0.003577	-2.52E-05	7.63E-05
2639	2000000	12	75000	14	20000	0.003659	0.003142	0.002902	0.00266	0.00221	-2.33E-05	5.65E-05
2640	2000000	12	75000	14	50000	0.002322	0.001834	0.001629	0.00144	0.0011	-2.12E-05	3.44E-05
2641	2000000	12	100000	6	5000	0.008417	0.007816	0.007475	0.0071	0.006296	-2.98E-05	1.19E-04
2642	2000000	12	100000	6	10000	0.005839	0.005274	0.004978	0.00467	0.004021	-2.69E-05	9.57E-05
2643	2000000	12	100000	6	20000	0.003938	0.003407	0.003152	0.00289	0.002393	-2.42E-05	7.47E-05
2644	2000000	12	100000	6	50000	0.002352	0.001864	0.001657	0.00146	0.00112	-2.11E-05	5.01E-05
2645	2000000	12	100000	8	5000	0.008065	0.007477	0.007151	0.0068	0.00603	-2.86E-05	1.13E-04
2646	2000000	12	100000	8	10000	0.005643	0.005089	0.004804	0.0045	0.00389	-0.000026	9.00E-05
2647	2000000	12	100000	8	20000	0.003834	0.003311	0.003064	0.00282	0.002334	-2.36E-05	6.94E-05
2648	2000000	12	100000	8	50000	0.00232	0.001834	0.001631	0.00144	0.001106	-2.08E-05	4.56E-05
2649	2000000	12	100000	10	5000	0.007684	0.007109	0.006797	0.00646	0.005736	-2.75E-05	1.06E-04
2650	2000000	12	100000	10	10000	0.005437	0.004892	0.004617	0.00433	0.003746	-2.51E-05	8.42E-05

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
2651	2000000	12	100000	10	20000	0.003729	0.003213	0.002973	0.00273	0.002271	-0.000023	6.44E-05
2652	2000000	12	100000	10	50000	0.002288	0.001805	0.001605	0.00142	0.001091	-2.05E-05	4.16E-05
2653	2000000	12	100000	12	5000	0.007288	0.006724	0.006425	0.00611	0.005423	-2.65E-05	9.95E-05
2654	2000000	12	100000	12	10000	0.005226	0.004689	0.004424	0.00415	0.003593	-2.44E-05	7.87E-05
2655	2000000	12	100000	12	20000	0.003625	0.003114	0.00288	0.00265	0.002204	-2.25E-05	5.98E-05
2656	2000000	12	100000	12	50000	0.002257	0.001777	0.00158	0.0014	0.001075	-2.03E-05	3.82E-05
2657	2000000	12	100000	14	5000	0.006888	0.006334	0.006048	0.00574	0.0051	-2.56E-05	9.29E-05
2658	2000000	12	100000	14	10000	0.005013	0.004485	0.004228	0.00397	0.003435	-2.38E-05	7.35E-05
2659	2000000	12	100000	14	20000	0.003522	0.003016	0.002788	0.00256	0.002136	-2.21E-05	5.56E-05
2660	2000000	12	100000	14	50000	0.002227	0.00175	0.001555	0.00137	0.00106	-2.02E-05	3.52E-05
2661	2000000	12	125000	6	5000	0.008289	0.007695	0.007362	0.007	0.006208	-2.89E-05	1.17E-04
2662	2000000	12	125000	6	10000	0.005765	0.005207	0.004917	0.00461	0.00398	-2.61E-05	9.45E-05
2663	2000000	12	125000	6	20000	0.003891	0.003366	0.003116	0.00286	0.002373	-2.35E-05	7.45E-05
2664	2000000	12	125000	6	50000	0.00232	0.001836	0.001634	0.00144	0.001109	-2.05E-05	5.10E-05
2665	2000000	12	125000	8	5000	0.007882	0.007304	0.006987	0.00664	0.005902	-2.75E-05	1.10E-04
2666	2000000	12	125000	8	10000	0.005538	0.004992	0.004715	0.00443	0.003828	-2.5E-05	8.83E-05
2667	2000000	12	125000	8	20000	0.003769	0.003253	0.003013	0.00277	0.002304	-2.27E-05	6.88E-05
2668	2000000	12	125000	8	50000	0.002276	0.001797	0.0016	0.00142	0.001091	-2.01E-05	4.62E-05
2669	2000000	12	125000	10	5000	0.007447	0.006883	0.006583	0.00626	0.005565	-2.63E-05	1.03E-04
2670	2000000	12	125000	10	10000	0.005302	0.004766	0.004501	0.00423	0.003663	-2.41E-05	8.21E-05
2671	2000000	12	125000	10	20000	0.003646	0.003138	0.002907	0.00268	0.002231	-2.21E-05	6.35E-05
2672	2000000	12	125000	10	50000	0.002233	0.001758	0.001565	0.00139	0.001071	-1.97E-05	4.20E-05
2673	2000000	12	125000	12	5000	0.007001	0.00645	0.006165	0.00586	0.005212	-2.51E-05	9.53E-05
2674	2000000	12	125000	12	10000	0.005061	0.004536	0.004282	0.00402	0.003489	-2.33E-05	7.62E-05
2675	2000000	12	125000	12	20000	0.003525	0.003024	0.0028	0.00258	0.002154	-2.15E-05	5.86E-05
2676	2000000	12	125000	12	50000	0.002192	0.001721	0.001532	0.00136	0.001051	-1.95E-05	3.84E-05
2677	2000000	12	125000	14	5000	0.006557	0.006018	0.005746	0.00546	0.004855	-2.42E-05	8.83E-05
2678	2000000	12	125000	14	10000	0.004822	0.004305	0.004061	0.00381	0.003311	-2.25E-05	7.07E-05
2679	2000000	12	125000	14	20000	0.003406	0.002911	0.002693	0.00248	0.002076	-2.1E-05	5.42E-05
2680	2000000	12	125000	14	50000	0.002154	0.001685	0.001499	0.00133	0.00103	-1.92E-05	3.53E-05
2681	2000000	12	150000	6	5000	0.008168	0.007581	0.007255	0.0069	0.006125	-2.81E-05	1.15E-04
2682	2000000	12	150000	6	10000	0.005696	0.005144	0.004859	0.00456	0.003941	-2.54E-05	9.32E-05
2683	2000000	12	150000	6	20000	0.003848	0.003329	0.003084	0.00284	0.002355	-2.29E-05	7.39E-05
2684	2000000	12	150000	6	50000	0.002292	0.001813	0.001615	0.00143	0.001101	-1.99E-05	5.13E-05
2685	2000000	12	150000	8	5000	0.007711	0.007142	0.006834	0.0065	0.005781	-2.65E-05	1.07E-04
2686	2000000	12	150000	8	10000	0.005442	0.004903	0.004633	0.00435	0.003771	-2.42E-05	8.65E-05
2687	2000000	12	150000	8	20000	0.003711	0.003202	0.002967	0.00273	0.002278	-2.2E-05	6.79E-05
2688	2000000	12	150000	8	50000	0.002239	0.001766	0.001574	0.00139	0.001079	-1.94E-05	4.64E-05
2689	2000000	12	150000	10	5000	0.00723	0.006677	0.006387	0.00608	0.005409	-2.51E-05	9.93E-05
2690	2000000	12	150000	10	10000	0.005178	0.004652	0.004396	0.00413	0.003588	-2.31E-05	8.00E-05
2691	2000000	12	150000	10	20000	0.003573	0.003072	0.002848	0.00263	0.002195	-2.12E-05	6.24E-05
2692	2000000	12	150000	10	50000	0.002188	0.001719	0.001532	0.00136	0.001056	-1.9E-05	4.21E-05
2693	2000000	12	150000	12	5000	0.006743	0.006204	0.00593	0.00564	0.005023	-2.39E-05	9.15E-05
2694	2000000	12	150000	12	10000	0.004914	0.004398	0.004154	0.0039	0.003396	-2.22E-05	7.38E-05
2695	2000000	12	150000	12	20000	0.003437	0.002944	0.002729	0.00252	0.00211	-2.06E-05	5.73E-05
2696	2000000	12	150000	12	50000	0.002139	0.001674	0.001492	0.00132	0.001032	-1.87E-05	3.83E-05
2697	2000000	12	150000	14	5000	0.006266	0.005739	0.00548	0.00521	0.004638	-2.29E-05	8.41E-05
2698	2000000	12	150000	14	10000	0.004653	0.004147	0.003913	0.00368	0.003201	-2.15E-05	6.80E-05
2699	2000000	12	150000	14	20000	0.003305	0.002819	0.002611	0.00241	0.002023	-2.01E-05	5.28E-05
2700	2000000	12	150000	14	50000	0.002093	0.001632	0.001453	0.00129	0.001007	-1.84E-05	3.50E-05

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
2701	2000000	14	50000	6	5000	0.006981	0.006467	0.006209	0.00593	0.005302	-2.45E-05	9.24E-05
2702	2000000	14	50000	6	10000	0.005023	0.004535	0.004307	0.00407	0.00356	-2.21E-05	7.38E-05
2703	2000000	14	50000	6	20000	0.003472	0.003008	0.00281	0.00261	0.002206	-1.99E-05	5.61E-05
2704	2000000	14	50000	6	50000	0.002135	0.001699	0.001534	0.00138	0.001088	-1.74E-05	3.53E-05
2705	2000000	14	50000	8	5000	0.006827	0.006318	0.006064	0.00579	0.005179	-2.41E-05	8.95E-05
2706	2000000	14	50000	8	10000	0.004935	0.004451	0.004227	0.00399	0.003494	-2.18E-05	7.07E-05
2707	2000000	14	50000	8	20000	0.003432	0.002969	0.002773	0.00257	0.002178	-1.97E-05	5.28E-05
2708	2000000	14	50000	8	50000	0.002137	0.0017	0.001535	0.00138	0.001089	-1.74E-05	3.23E-05
2709	2000000	14	50000	10	5000	0.006658	0.006153	0.005904	0.00563	0.005041	-2.36E-05	8.64E-05
2710	2000000	14	50000	10	10000	0.004842	0.00436	0.004139	0.00391	0.003422	-2.15E-05	6.76E-05
2711	2000000	14	50000	10	20000	0.00339	0.002929	0.002735	0.00254	0.002149	-1.95E-05	4.99E-05
2712	2000000	14	50000	10	50000	0.002138	0.001701	0.001536	0.00138	0.00109	-1.74E-05	2.98E-05
2713	2000000	14	50000	12	5000	0.006476	0.005976	0.005732	0.00547	0.004891	-2.32E-05	8.32E-05
2714	2000000	14	50000	12	10000	0.004743	0.004265	0.004047	0.00382	0.003345	-2.12E-05	6.46E-05
2715	2000000	14	50000	12	20000	0.003347	0.002888	0.002696	0.0025	0.002118	-1.93E-05	4.71E-05
2716	2000000	14	50000	12	50000	0.002138	0.001702	0.001537	0.00138	0.001091	-1.74E-05	2.77E-05
2717	2000000	14	50000	14	5000	0.006285	0.005788	0.005549	0.00529	0.004732	-2.28E-05	7.98E-05
2718	2000000	14	50000	14	10000	0.004642	0.004166	0.003952	0.00373	0.003264	-2.09E-05	6.17E-05
2719	2000000	14	50000	14	20000	0.003304	0.002847	0.002656	0.00246	0.002086	-1.92E-05	4.46E-05
2720	2000000	14	50000	14	50000	0.002139	0.001703	0.001538	0.00138	0.001092	-1.74E-05	2.59E-05
2721	2000000	14	75000	6	5000	0.006874	0.006365	0.006111	0.00583	0.005223	-2.39E-05	9.16E-05
2722	2000000	14	75000	6	10000	0.004956	0.004472	0.004248	0.00401	0.003515	-2.15E-05	7.41E-05
2723	2000000	14	75000	6	20000	0.003423	0.002963	0.002768	0.00257	0.002177	-1.94E-05	5.75E-05
2724	2000000	14	75000	6	50000	0.002089	0.001657	0.001496	0.00134	0.001064	-1.68E-05	3.79E-05
2725	2000000	14	75000	8	5000	0.006669	0.006166	0.005919	0.00565	0.00506	-2.32E-05	8.81E-05
2726	2000000	14	75000	8	10000	0.004837	0.004358	0.00414	0.00391	0.003428	-2.11E-05	7.06E-05
2727	2000000	14	75000	8	20000	0.003362	0.002905	0.002714	0.00252	0.002137	-1.9E-05	5.41E-05
2728	2000000	14	75000	8	50000	0.002075	0.001644	0.001484	0.00133	0.001057	-1.67E-05	3.47E-05
2729	2000000	14	75000	10	5000	0.006444	0.005947	0.005707	0.00545	0.004878	-2.26E-05	8.44E-05
2730	2000000	14	75000	10	10000	0.00471	0.004235	0.004022	0.0038	0.003331	-2.06E-05	6.72E-05
2731	2000000	14	75000	10	20000	0.003299	0.002845	0.002657	0.00247	0.002094	-1.87E-05	5.09E-05
2732	2000000	14	75000	10	50000	0.00206	0.00163	0.00147	0.00132	0.00105	-1.66E-05	3.21E-05
2733	2000000	14	75000	12	5000	0.00621	0.00571	0.00548	0.00523	0.00468	-0.000022	8.05E-05
2734	2000000	14	75000	12	10000	0.00458	0.00411	0.0039	0.00368	0.00323	-2.02E-05	6.38E-05
2735	2000000	14	75000	12	20000	0.00324	0.00278	0.0026	0.00241	0.00205	-1.85E-05	4.79E-05
2736	2000000	14	75000	12	50000	0.00205	0.00162	0.00146	0.00131	0.00104	-1.65E-05	2.97E-05
2737	2000000	14	75000	14	5000	0.00596	0.00547	0.00524	0.005	0.00448	-2.15E-05	7.65E-05
2738	2000000	14	75000	14	10000	0.00444	0.00398	0.00377	0.00356	0.00312	-1.98E-05	6.05E-05
2739	2000000	14	75000	14	20000	0.00317	0.00272	0.00254	0.00236	0.002	-1.82E-05	4.51E-05
2740	2000000	14	75000	14	50000	0.00203	0.00161	0.00145	0.0013	0.00103	-1.65E-05	2.77E-05
2741	2000000	14	100000	6	5000	0.00677	0.00627	0.00602	0.00575	0.00515	-2.33E-05	9.04E-05
2742	2000000	14	100000	6	10000	0.0049	0.00442	0.0042	0.00396	0.00348	-0.000021	7.36E-05
2743	2000000	14	100000	6	20000	0.00338	0.00293	0.00274	0.00254	0.00216	-1.89E-05	5.79E-05
2744	2000000	14	100000	6	50000	0.00206	0.00163	0.00147	0.00132	0.00105	-1.64E-05	3.92E-05
2745	2000000	14	100000	8	5000	0.00652	0.00603	0.00579	0.00552	0.00495	-2.24E-05	8.64E-05
2746	2000000	14	100000	8	10000	0.00475	0.00428	0.00406	0.00384	0.00337	-2.04E-05	6.99E-05
2747	2000000	14	100000	8	20000	0.00331	0.00285	0.00267	0.00248	0.00211	-1.84E-05	5.42E-05
2748	2000000	14	100000	8	50000	0.00203	0.00161	0.00145	0.00131	0.00104	-1.62E-05	3.59E-05
2749	2000000	14	100000	10	5000	0.00625	0.00576	0.00553	0.00528	0.00473	-2.17E-05	8.20E-05
2750	2000000	14	100000	10	10000	0.0046	0.00413	0.00392	0.00371	0.00325	-1.98E-05	6.60E-05

No.	E(1)	h(1)	E(2)	h(2)	E(3)	D0	D12	D18	D24	D36	et	ec
2751	2000000	14	100000	10	20000	0.00323	0.00278	0.0026	0.00241	0.00205	-0.000018	5.08E-05
2752	2000000	14	100000	10	50000	0.00201	0.00159	0.00143	0.00129	0.00102	-0.000016	3.31E-05
2753	2000000	14	100000	12	5000	0.00597	0.00548	0.00526	0.00502	0.0045	-0.000021	7.76E-05
2754	2000000	14	100000	12	10000	0.00444	0.00397	0.00377	0.00356	0.00313	-1.93E-05	6.23E-05
2755	2000000	14	100000	12	20000	0.00315	0.0027	0.00252	0.00235	0.002	-1.77E-05	4.76E-05
2756	2000000	14	100000	12	50000	0.00199	0.00156	0.00141	0.00127	0.00101	-1.58E-05	3.06E-05
2757	2000000	14	100000	14	5000	0.00567	0.0052	0.00498	0.00475	0.00425	-2.03E-05	7.31E-05
2758	2000000	14	100000	14	10000	0.00427	0.00381	0.00362	0.00342	0.003	-1.88E-05	5.87E-05
2759	2000000	14	100000	14	20000	0.00307	0.00262	0.00245	0.00228	0.00194	-1.74E-05	4.46E-05
2760	2000000	14	100000	14	50000	0.00196	0.00154	0.00139	0.00125	0.000996	-1.57E-05	2.84E-05
2761	2000000	14	125000	6	5000	0.00668	0.00618	0.00594	0.00567	0.00508	-2.27E-05	8.91E-05
2762	2000000	14	125000	6	10000	0.00484	0.00436	0.00415	0.00392	0.00344	-2.05E-05	7.29E-05
2763	2000000	14	125000	6	20000	0.00335	0.0029	0.00271	0.00252	0.00214	-1.84E-05	5.78E-05
2764	2000000	14	125000	6	50000	0.00203	0.00161	0.00145	0.00131	0.00104	-1.59E-05	3.99E-05
2765	2000000	14	125000	8	5000	0.00639	0.0059	0.00566	0.00541	0.00485	-2.17E-05	8.45E-05
2766	2000000	14	125000	8	10000	0.00467	0.0042	0.00399	0.00378	0.00332	-1.97E-05	6.88E-05
2767	2000000	14	125000	8	20000	0.00326	0.00281	0.00263	0.00244	0.00208	-1.79E-05	5.40E-05
2768	2000000	14	125000	8	50000	0.002	0.00158	0.00143	0.00128	0.00102	-1.57E-05	3.65E-05
2769	2000000	14	125000	10	5000	0.00608	0.00559	0.00537	0.00512	0.0046	-2.08E-05	7.97E-05
2770	2000000	14	125000	10	10000	0.00449	0.00403	0.00383	0.00362	0.00318	-1.91E-05	6.47E-05
2771	2000000	14	125000	10	20000	0.00316	0.00272	0.00254	0.00237	0.00202	-1.74E-05	5.03E-05
2772	2000000	14	125000	10	50000	0.00197	0.00155	0.0014	0.00126	0.00101	-1.54E-05	3.35E-05
2773	2000000	14	125000	12	5000	0.00575	0.00527	0.00506	0.00483	0.00433	-0.00002	7.48E-05
2774	2000000	14	125000	12	10000	0.00431	0.00385	0.00366	0.00346	0.00304	-1.85E-05	6.06E-05
2775	2000000	14	125000	12	20000	0.00307	0.00263	0.00246	0.00229	0.00195	-0.000017	4.69E-05
2776	2000000	14	125000	12	50000	0.00194	0.00152	0.00137	0.00124	0.000988	-1.52E-05	3.09E-05
2777	2000000	14	125000	14	5000	0.00542	0.00495	0.00475	0.00453	0.00406	-1.93E-05	6.99E-05
2778	2000000	14	125000	14	10000	0.00412	0.00367	0.00349	0.00329	0.0029	-0.000018	5.68E-05
2779	2000000	14	125000	14	20000	0.00298	0.00254	0.00237	0.00221	0.00188	-1.66E-05	4.38E-05
2780	2000000	14	125000	14	50000	0.00191	0.00149	0.00135	0.00121	0.000969	-1.51E-05	2.86E-05
2781	2000000	14	150000	6	5000	0.00659	0.00609	0.00585	0.00559	0.00501	-2.21E-05	8.77E-05
2782	2000000	14	150000	6	10000	0.00479	0.00432	0.0041	0.00388	0.00341	-0.00002	7.21E-05
2783	2000000	14	150000	6	20000	0.00332	0.00287	0.00268	0.0025	0.00212	-0.000018	5.75E-05
2784	2000000	14	150000	6	50000	0.00201	0.00159	0.00144	0.0013	0.00103	-1.56E-05	4.02E-05
2785	2000000	14	150000	8	5000	0.00626	0.00578	0.00555	0.0053	0.00475	-0.000021	8.27E-05
2786	2000000	14	150000	8	10000	0.0046	0.00413	0.00393	0.00372	0.00327	-1.91E-05	6.77E-05
2787	2000000	14	150000	8	20000	0.00321	0.00277	0.00259	0.00241	0.00206	-1.73E-05	5.34E-05
2788	2000000	14	150000	8	50000	0.00197	0.00155	0.00141	0.00127	0.00101	-1.52E-05	3.68E-05
2789	2000000	14	150000	10	5000	0.00591	0.00544	0.00522	0.00498	0.00447	-2.01E-05	7.74E-05
2790	2000000	14	150000	10	10000	0.0044	0.00394	0.00375	0.00354	0.00312	-1.84E-05	6.33E-05
2791	2000000	14	150000	10	20000	0.00311	0.00267	0.0025	0.00233	0.00199	-1.68E-05	4.96E-05
2792	2000000	14	150000	10	50000	0.00193	0.00152	0.00137	0.00124	0.000991	-1.49E-05	3.37E-05
2793	2000000	14	150000	12	5000	0.00555	0.00509	0.00488	0.00466	0.00418	-1.92E-05	7.21E-05
2794	2000000	14	150000	12	10000	0.00419	0.00374	0.00356	0.00336	0.00296	-1.77E-05	5.90E-05
2795	2000000	14	150000	12	20000	0.003	0.00257	0.0024	0.00224	0.00191	-1.63E-05	4.61E-05
2796	2000000	14	150000	12	50000	0.0019	0.00148	0.00134	0.00121	0.00097	-1.47E-05	3.09E-05
2797	2000000	14	150000	14	5000	0.0052	0.00474	0.00454	0.00433	0.00388	-1.84E-05	6.70E-05
2798	2000000	14	150000	14	10000	0.00399	0.00355	0.00337	0.00318	0.0028	-1.72E-05	5.49E-05
2799	2000000	14	150000	14	20000	0.0029	0.00247	0.00231	0.00215	0.00184	-1.59E-05	4.28E-05
2800	2000000	14	150000	14	50000	0.00186	0.00145	0.00131	0.00118	0.000948	-1.45E-05	2.85E-05

APPENDIX B: COMPARISON OF GIVEN C_C AND PREDICTED C_C

No.	ec(given)	ec(regressed)
1	0.001543	0.001515527
2	0.001207	0.001174101
3	0.000965	0.000938384
4	0.0007867	0.000768418
5	0.0006524	0.000641597
6	0.001316	0.001350609
7	0.00101	0.001027865
8	0.0007964	0.000810337
9	0.0006429	0.000656381
10	0.0005291	0.000543205
11	0.001162	0.001238313
12	0.000881	0.000930577
13	0.000689	0.000726641
14	0.0005529	0.000584162
15	0.0004529	0.000480493
16	0.001051	0.001154321
17	0.0007897	0.000859038
18	0.00127	0.001205828
19	0.001025	0.000960784
20	0.0008385	0.000784853
21	0.0006957	0.000654031
22	0.0005849	0.000553963
23	0.001108	0.001088808
24	0.000873	0.000852349
25	0.0007016	0.00068663
26	0.0005744	0.000565744
27	0.0004778	0.000474712
28	0.0009894	0.001007707
29	0.0007673	0.00077892
30	0.00061	0.000621311
31	0.0004953	0.000507883
32	0.0004092	0.000423392
33	0.0008993	0.000946248
34	0.0006899	0.000724223
35	0.0005443	0.000573297
36	0.0004394	0.000465798
37	0.0008286	0.00089713
38	0.0009959	0.000936628
39	0.0008356	0.000767127
40	0.0007038	0.000640618
41	0.0005974	0.000543557
42	0.0005114	0.000467372
43	0.0008959	0.000856591
44	0.0007315	0.00068967
45	0.0006032	0.000568001
46	0.0005034	0.000476436
47	0.0008157	0.000800157
48	0.0006535	0.000636275
49	0.0005313	0.000518842
50	0.0004385	0.00043167

No.	ec(given)	ec(regressed)
51	0.0007511	0.000756835
52	0.0005933	0.000595974
53	0.0004775	0.000482232
54	0.0006983	0.000721853
55	0.0007395	0.000710837
56	0.0006481	0.000597727
57	0.0005649	0.000510085
58	0.0004928	0.000440724
59	0.0006873	0.000658005
60	0.0005863	0.000544419
61	0.0005	0.000458378
62	0.000641	0.000620138
63	0.000536	0.000507022
64	0.000601	0.000590706
65	0.0003613	0.000386386
66	0.0004249	0.00040571
67	0.0003665	0.000365094
68	0.0004312	0.000384842
69	0.0006141	0.000665879
70	0.0004907	0.000532254
71	0.0004006	0.000435778
72	0.0009655	0.00108789
73	0.0007212	0.00080321
74	0.0005584	0.000618933
75	0.0004447	0.000492457
76	0.0006305	0.000681103
77	0.0004947	0.000535838
78	0.0003977	0.000433234
79	0.0005457	0.000563869
80	0.0004357	0.000453378
81	0.000449	0.000422741
82	0.000494	0.000478424
83	0.000567	0.0005667
84	0.00046	0.000455403
85	0.0003621	0.000401709
86	0.0003258	0.000357943
87	0.0003908	0.000398695
88	0.0003244	0.000335447
89	0.0003543	0.000372928
90	0.0002925	0.000312444
91	0.000427	0.000391561
92	0.0003625	0.000338586
93	0.000379	0.000358177
94	0.000322	0.000307572
95	0.000409	0.000395848
96	0.000341	0.000333261
97	0.000287	0.000284639
98	0.000376	0.000374428
99	0.000311	0.000313588
100	0.00026	0.000266665

No.	ec(given)	ec(regressed)
101	0.001147	0.001136855
102	0.0009058	0.000879333
103	0.0007284	0.000701815
104	0.000596	0.000573987
105	0.0004954	0.000478722
106	0.001007	0.001012413
107	0.0007803	0.000769173
108	0.0006188	0.000605498
109	0.0005011	0.000489821
110	0.0004132	0.000404893
111	0.0009036	0.000927733
112	0.0006915	0.00069594
113	0.0005435	0.000542593
114	0.0004373	0.000435616
115	0.000359	0.000357879
116	0.0008251	0.000864428
117	0.0006258	0.00064212
118	0.0004888	0.000496953
119	0.0003915	0.00039668
120	0.0009464	0.000903245
121	0.0007692	0.000718674
122	0.0006325	0.00058634
123	0.0005268	0.000488057
124	0.0004442	0.000412961
125	0.0008495	0.00081507
126	0.0006751	0.000637089
127	0.0005457	0.000512537
128	0.0004485	0.000421798
129	0.0003744	0.000353548
130	0.0007713	0.000753995
131	0.0006036	0.00058188
132	0.0004825	0.000463494
133	0.0003934	0.000378408
134	0.0007088	0.000707733
135	0.0005485	0.000540776
136	0.0004351	0.000427464
137	0.0003527	0.000346868
138	0.0006581	0.000670774
139	0.0007432	0.000700493
140	0.0006255	0.000573016
141	0.0005288	0.000477987
142	0.0004504	0.000405157
143	0.0003868	0.000348048
144	0.0006864	0.00064028
145	0.0005639	0.00051482
146	0.0004675	0.000423491
147	0.000392	0.000354839
148	0.0006352	0.000597844
149	0.0005126	0.000474726
150	0.0004192	0.000386624
151	0.0005913	0.000565282

No.	ec(given)	ec(regressed)
152	0.0004708	0.000444479
153	0.0005541	0.000538996
154	0.0005536	0.00053072
155	0.0004841	0.000445794
156	0.0004223	0.000380059
157	0.0005264	0.000491041
158	0.00045	0.000405803
159	0.000498	0.000462613
160	0.0003203	0.000324381
161	0.0003262	0.000315106
162	0.0002912	0.000287404
163	0.0003324	0.000301868
164	0.0003478	0.000321304
165	0.0002925	0.000271473
166	0.0003692	0.000328086
167	0.0003241	0.000286248
168	0.0007636	0.000814379
169	0.0005751	0.000600139
170	0.000447	0.000461709
171	0.0003568	0.000366846
172	0.000505	0.000508386
173	0.0003982	0.000399369
174	0.0003813	0.000359183
175	0.0004365	0.000420392
176	0.0003508	0.000337564
177	0.000385	0.00034131
178	0.0004178	0.000377763
179	0.000472	0.000440526
180	0.0003899	0.000356329
181	0.000448	0.000422516
182	0.000366	0.000339081
183	0.0002912	0.000298872
184	0.0003214	0.000322476
185	0.0002646	0.000266124
186	0.0003139	0.000296616
187	0.0002624	0.0002493
188	0.0002872	0.000277333
189	0.0002389	0.000232104
190	0.000331	0.000291277
191	0.000286	0.000251647
192	0.000352	0.000314618
193	0.000299	0.000266299
194	0.000256	0.000228463
195	0.000325	0.000294486
196	0.000273	0.000247665
197	0.000232	0.000211329
198	0.000302	0.000278456
199	0.000252	0.000232959
200	0.000212	0.000197907
201	0.000796	0.000851267
202	0.0006335	0.000657386

No.	ec(given)	ec(regressed)
203	0.0005121	0.000523943
204	0.0004205	0.000427982
205	0.0003503	0.000356552
206	0.0007269	0.000757538
207	0.0005687	0.000574554
208	0.0004537	0.000451626
209	0.0003687	0.00036487
210	0.0003047	0.000301256
211	0.0006679	0.0006938
212	0.0005164	0.00051953
213	0.0004084	0.000404434
214	0.0003297	0.00032426
215	0.0002711	0.000266076
216	0.0006196	0.000646174
217	0.0004748	0.000479115
218	0.0003731	0.000370216
219	0.0002998	0.000295108
220	0.0006603	0.000675375
221	0.0005393	0.000536607
222	0.0004453	0.00043725
223	0.0003721	0.000363548
224	0.0003145	0.000307296
225	0.0006163	0.000609057
226	0.0004937	0.000475338
227	0.0004013	0.000381897
228	0.0003311	0.000313913
229	0.000277	0.000262836
230	0.0005734	0.000563147
231	0.0004529	0.000433904
232	0.0003642	0.000345142
233	0.000298	0.000281434
234	0.0005358	0.000528388
235	0.0004187	0.000403072
236	0.000334	0.000318155
237	0.0005035	0.00050063
238	0.0005212	0.00052295
239	0.0004391	0.000427254
240	0.0003719	0.000356002
241	0.0003175	0.000301453
242	0.0004995	0.000477733
243	0.0004124	0.000383609
244	0.0003434	0.00031518
245	0.0002889	0.000263802
246	0.0004732	0.000445882
247	0.0003846	0.000353558
248	0.0003162	0.000287582
249	0.0004478	0.000421451
250	0.0003595	0.000330898
251	0.0003912	0.00039553
252	0.0003406	0.000331883
253	0.0002967	0.00028267

No.	ec(given)	ec(regressed)
254	0.0003846	0.000365784
255	0.0002456	0.000241027
256	0.0002477	0.000234094
257	0.0002717	0.00025784
258	0.0002248	0.000213394
259	0.0002732	0.000258723
260	0.0002456	0.0002242
261	0.0002634	0.000238727
262	0.0002221	0.000201496
263	0.0002594	0.000243796
264	0.000228	0.000212531
265	0.0005798	0.000608537
266	0.0004412	0.000447605
267	0.000345	0.000343805
268	0.0002762	0.000272783
269	0.0003902	0.000378786
270	0.0003094	0.000297121
271	0.0002928	0.000267051
272	0.0004248	0.000401736
273	0.0003375	0.000312859
274	0.000329	0.000301937
275	0.000372	0.000344482
276	0.000313	0.000280951
277	0.000357	0.000327937
278	0.000297	0.000264916
279	0.000343	0.00031445
280	0.0002256	0.000221962
281	0.0002505	0.000239603
282	0.0002066	0.000197502
283	0.0002421	0.000220277
284	0.0002029	0.000184943
285	0.0002728	0.000250883
286	0.0002243	0.000205873
287	0.0001872	0.000172113
288	0.000282	0.000253683
289	0.000243	0.000216288
290	0.00021	0.000186695
291	0.000264	0.000233729
292	0.000225	0.000197633
293	0.000193	0.000169396
294	0.000248	0.000218685
295	0.00021	0.000183723
296	0.000179	0.000156619
297	0.000282	0.000252017
298	0.000234	0.000206711
299	0.000196	0.00017275
300	0.000166	0.000146613
301	0.0004308	0.000579136
302	0.000345	0.000446291
303	0.0002802	0.000355043
304	0.0002309	0.000289542

No.	ec(given)	ec(regressed)
305	0.0001928	0.000240863
306	0.0004184	0.000514879
307	0.0003306	0.000389631
308	0.0002655	0.000305671
309	0.0002167	0.000246528
310	0.0001796	0.000203233
311	0.0004005	0.000471219
312	0.0003134	0.000352028
313	0.0002497	0.000273486
314	0.0002026	0.000218881
315	0.0003825	0.000438618
316	0.0002971	0.000324431
317	0.0002354	0.000250169
318	0.0001901	0.000199053
319	0.0003606	0.000458605
320	0.0002952	0.000363695
321	0.0002444	0.000295863
322	0.0002048	0.000245627
323	0.0001734	0.000207341
324	0.0003583	0.000413224
325	0.0002889	0.000321853
326	0.0002361	0.000258127
327	0.0001955	0.000211842
328	0.0003477	0.000381833
329	0.0002772	0.000293581
330	0.0002244	0.000233094
331	0.0003349	0.00035808
332	0.0002647	0.000272558
333	0.0002128	0.000214728
334	0.0003221	0.00033912
335	0.0002874	0.000354365
336	0.0002414	0.000289046
337	0.0002045	0.000240488
338	0.0001747	0.000203368
339	0.0002927	0.000323488
340	0.0002422	0.000259294
341	0.0002023	0.000212704
342	0.000289	0.000301752
343	0.0002363	0.000238824
344	0.0001953	0.000193937
345	0.0001671	0.000179322
346	0.0001562	0.000162312
347	0.000164	0.000177121
348	0.0001845	0.000189758
349	0.0001538	0.000157606
350	0.0001739	0.000173728
351	0.0001443	0.000143564
352	0.0001505	0.000174327
353	0.0001707	0.000177777
354	0.0001455	0.000150893
355	0.0001633	0.000160751

No.	ec(given)	ec(regressed)
356	0.0001381	0.000135498
357	0.0003659	0.000412869
358	0.0002824	0.000302927
359	0.0002227	0.000232184
360	0.0002527	0.000256007
361	0.000202	0.000200422
362	0.0002819	0.000285089
363	0.0002282	0.000223398
364	0.0002737	0.000271648
365	0.0002197	0.000211125
366	0.0002185	0.000267417
367	0.0001885	0.000224069
368	0.0002276	0.000247151
369	0.000194	0.000203697
370	0.000229	0.000232645
371	0.000226	0.000221384
372	0.000222	0.000212207
373	0.0001785	0.000183879
374	0.0001469	0.000149375
375	0.0001644	0.000161345
376	0.0001359	0.000132791
377	0.0001871	0.000179984
378	0.0001554	0.000148232
379	0.0001307	0.000124282
380	0.0001789	0.000169003
381	0.0001478	0.000138464
382	0.0001237	0.000115594
383	0.0001635	0.000190597
384	0.0001428	0.000164192
385	0.0001254	0.000142979
386	0.000166	0.000170905
387	0.000143	0.000145526
388	0.000124	0.000125468
389	0.000193	0.00018943
390	0.000163	0.000157359
391	0.000139	0.000132879
392	0.00012	0.000113755
393	0.000189	0.000178534
394	0.000158	0.000147152
395	0.000134	0.000123456
396	0.000115	0.000105109
397	0.000184	0.000169773
398	0.000153	0.000139033
399	0.000129	0.000116026
400	0.00011	9.83431E-05
401	0.00103	0.000998643
402	0.0008413	0.000812489
403	0.000696	0.000674853
404	0.0005837	0.000570063
405	0.0004956	0.000488335
406	0.0009072	0.000910501

No.	ec(given)	ec(regressed)
407	0.000725	0.000728082
408	0.0005901	0.000596385
409	0.0004886	0.000498032
410	0.0004108	0.000422542
411	0.0008167	0.000848611
412	0.0006436	0.000670148
413	0.0005185	0.000543497
414	0.000426	0.000450201
415	0.0007479	0.000801249
416	0.0005835	0.000626564
417	0.0004668	0.000504238
418	0.0006938	0.000763101
419	0.0007906	0.000762147
420	0.0006696	0.000636843
421	0.0005699	0.000540622
422	0.0004888	0.000465044
423	0.0007157	0.000703466
424	0.0005916	0.000578223
425	0.0004938	0.000484231
426	0.0006554	0.000661571
427	0.0005325	0.000537274
428	0.0004387	0.000445535
429	0.0006066	0.000629106
430	0.0004867	0.000506059
431	0.0005666	0.00060269
432	0.0005748	0.000568839
433	0.0005072	0.00048737
434	0.0004462	0.000422523
435	0.0005367	0.000531081
436	0.0004623	0.000448117
437	0.0005026	0.000503702
438	0.0004731	0.000482232
439	0.000356	0.000379391
440	0.0003815	0.000415078
441	0.0003175	0.000347988
442	0.0004229	0.000404541
443	0.000417	0.000411797
444	0.0003562	0.000354736
445	0.0003668	0.000375799
446	0.0003108	0.000321489
447	0.0003973	0.000416429
448	0.0003932	0.000370022
449	0.0003479	0.00032689
450	0.0003983	0.00038349
451	0.000425	0.000420228
452	0.0005373	0.000591932
453	0.0004275	0.000473375
454	0.0004502	0.000480995
455	0.0004475	0.000464594
456	0.000348	0.000387701
457	0.0002888	0.000323682

No.	ec(given)	ec(regressed)
458	0.0003299	0.000349019
459	0.000278	0.000296984
460	0.000365	0.000393306
461	0.0003015	0.000327929
462	0.0002531	0.000277827
463	0.000345	0.000332118
464	0.0003007	0.000290574
465	0.0003607	0.000356227
466	0.0003086	0.000306026
467	0.0002663	0.00026589
468	0.0003942	0.000398695
469	0.0003308	0.000335447
470	0.0002804	0.000286356
471	0.0002402	0.000247454
472	0.0003685	0.000381226
473	0.0003065	0.000318764
474	0.000258	0.000270701
475	0.0002198	0.000232891
476	0.000397	0.000415833
477	0.0003646	0.000364558
478	0.0003321	0.000322366
479	0.0003016	0.000287211
480	0.0002737	0.000257596
481	0.0003811	0.000392296
482	0.0003429	0.000339174
483	0.0003064	0.000296319
484	0.0002733	0.000261223
485	0.0002441	0.000232102
486	0.000365	0.000374985
487	0.0003229	0.000320848
488	0.0002841	0.000277814
489	0.00025	0.000243015
490	0.0002207	0.000214458
491	0.0003499	0.000361262
492	0.0003051	0.000306526
493	0.0002651	0.000263527
494	0.0002309	0.000229106
495	0.000202	0.000201103
496	0.0003361	0.000349886
497	0.0002894	0.000294793
498	0.0002489	0.000251938
499	0.0002149	0.000217918
500	0.0001867	0.00019044
501	0.0007746	0.000747172
502	0.0006348	0.000607116
503	0.000527	0.000503693
504	0.0004433	0.000425038
505	0.0003773	0.000363756
506	0.0007005	0.000680834
507	0.000563	0.000543675
508	0.0004603	0.000444787

No.	ec(given)	ec(regressed)
509	0.0003823	0.000371025
510	0.0006407	0.000634278
511	0.0005081	0.000500159
512	0.0004112	0.000405112
513	0.0003387	0.000335184
514	0.0005929	0.000598666
515	0.0004656	0.000467436
516	0.000374	0.000375676
517	0.000554	0.000569991
518	0.0005968	0.000569274
519	0.0005056	0.000475153
520	0.0004311	0.000402956
521	0.0003706	0.000346304
522	0.000554	0.000525183
523	0.0004595	0.00043116
524	0.0003849	0.000360681
525	0.0005152	0.000493719
526	0.0004206	0.000400445
527	0.0004819	0.000469345
528	0.0003888	0.000377041
529	0.0004536	0.000449518
530	0.0004363	0.00042412
531	0.0003833	0.000363033
532	0.0004164	0.000395801
533	0.0003585	0.000333623
534	0.0003953	0.000375275
535	0.0003221	0.00031447
536	0.0002835	0.000282169
537	0.0003063	0.000308881
538	0.0002552	0.000258678
539	0.0003212	0.000300992
540	0.000326	0.000306424
541	0.0002791	0.000263724
542	0.000348	0.000331689
543	0.0002918	0.000279482
544	0.0002478	0.000238865
545	0.0003368	0.000314455
546	0.000297	0.00027516
547	0.000263	0.000242902
548	0.0004318	0.000441446
549	0.0003448	0.000352545
550	0.0003625	0.000358256
551	0.0003756	0.000359183
552	0.0003579	0.000345966
553	0.0002812	0.000288388
554	0.0002335	0.000240504
555	0.0003187	0.000309892
556	0.0002653	0.000259449
557	0.000224	0.000220551
558	0.000295	0.000292583
559	0.0002443	0.000243679

No.	ec(given)	ec(regressed)
560	0.0002054	0.000206241
561	0.0003094	0.000285237
562	0.0002684	0.00024681
563	0.0002345	0.000215763
564	0.0003348	0.000312737
565	0.0002849	0.00026484
566	0.0002444	0.000227308
567	0.0002114	0.000197328
568	0.0003139	0.000296616
569	0.0002643	0.0002493
570	0.0002247	0.000212612
571	0.000193	0.000183566
572	0.0002958	0.000283543
573	0.0002469	0.000236828
574	0.0002085	0.00020092
575	0.0001781	0.000172699
576	0.0003036	0.000309446
577	0.0002764	0.000271071
578	0.0002506	0.00023952
579	0.0002269	0.000213251
580	0.0002057	0.000191136
581	0.0002968	0.000291827
582	0.0002657	0.000252086
583	0.000237	0.000220055
584	0.0002114	0.000193843
585	0.000189	0.000172111
586	0.0002874	0.000278873
587	0.0002536	0.000238386
588	0.0002231	0.000206232
589	0.0001966	0.000180253
590	0.000174	0.000158952
591	0.0002777	0.000268606
592	0.0002419	0.000227681
593	0.0002104	0.000195564
594	0.0001837	0.000169876
595	0.0001612	0.000148995
596	0.0002684	0.000260097
597	0.0002311	0.000218914
598	0.0001992	0.000186912
599	0.0001725	0.000161531
600	0.0001503	0.000141049
601	0.0005457	0.00055802
602	0.0004477	0.00045284
603	0.0003724	0.000375267
604	0.0003138	0.000316338
605	0.0002675	0.000270472
606	0.000512	0.000508184
607	0.0004133	0.000405246
608	0.000339	0.000331129
609	0.0002824	0.00027591
610	0.000479	0.000473228

No.	ec(given)	ec(regressed)
611	0.000382	0.000372619
612	0.0003104	0.00030142
613	0.0004501	0.000446499
614	0.0003557	0.000348096
615	0.000287	0.00027939
616	0.0004253	0.000424984
617	0.0004236	0.000424446
618	0.000358	0.000353878
619	0.0003052	0.000299806
620	0.0004074	0.000391379
621	0.0003383	0.000320923
622	0.0002841	0.000268171
623	0.0003873	0.000367791
624	0.0003174	0.000297926
625	0.0003679	0.000349526
626	0.0002983	0.000280411
627	0.0003126	0.000315651
628	0.0002726	0.000269931
629	0.000308	0.00029445
630	0.0002384	0.000233618
631	0.0002565	0.000249103
632	0.0002152	0.000209484
633	0.0002358	0.000229441
634	0.0001968	0.000191943
635	0.0002626	0.000257418
636	0.0002278	0.000223546
637	0.0002412	0.000227605
638	0.0002069	0.000195711
639	0.0002635	0.00024649
640	0.0002216	0.000207477
641	0.0001886	0.000177156
642	0.0002388	0.000233607
643	0.0002103	0.000204249
644	0.0001862	0.000180169
645	0.0003337	0.000328626
646	0.0003503	0.000334673
647	0.0002815	0.000266358
648	0.0002984	0.000279089
649	0.0002876	0.000267051
650	0.0002677	0.000262086
651	0.0002189	0.00021413
652	0.0001821	0.000178379
653	0.0002455	0.000230197
654	0.0002051	0.000192519
655	0.0001735	0.000163495
656	0.0002302	0.000217263
657	0.0001912	0.000180749
658	0.000161	0.000152825
659	0.0002645	0.000247936
660	0.0002282	0.000211776
661	0.0001983	0.000183085

No.	ec(given)	ec(regressed)
662	0.0001734	0.000159924
663	0.0002528	0.000232323
664	0.0002155	0.000196543
665	0.0001853	0.000168535
666	0.0001606	0.000146182
667	0.0002409	0.000220277
668	0.0002034	0.000184943
669	0.0001734	0.000157575
670	0.0001493	0.000135928
671	0.000277	0.000257166
672	0.0002297	0.00021051
673	0.0001925	0.000175637
674	0.000163	0.000148859
675	0.0001396	0.000127834
676	0.00022	0.000229863
677	0.000198	0.000201197
678	0.0001783	0.000177645
679	0.0001608	0.000158051
680	0.0001455	0.000141568
681	0.0002213	0.000216698
682	0.0001967	0.000187023
683	0.0001748	0.000163125
684	0.0001558	0.000143585
685	0.0001392	0.000127396
686	0.0002182	0.000207023
687	0.0001917	0.000176799
688	0.0001684	0.000152818
689	0.0001485	0.00013346
690	0.0001315	0.0001176
691	0.0002134	0.000199356
692	0.0001855	0.000168813
693	0.0001615	0.000144867
694	0.0001411	0.000125732
695	0.000124	0.000110191
696	0.0002082	0.000193003
697	0.0001792	0.000162274
698	0.0001547	0.000138421
699	0.0001342	0.00011952
700	0.0001172	0.00010428
701	0.0003019	0.000378328
702	0.0002472	0.000306499
703	0.0002056	0.00025361
704	0.0001733	0.000213492
705	0.0003007	0.000344279
706	0.0002432	0.00027404
707	0.0002	0.000223556
708	0.0002926	0.000320412
709	0.0002345	0.000251806
710	0.0001913	0.000203345
711	0.0002829	0.000302173
712	0.000225	0.000235105

No.	ec(given)	ec(regressed)
713	0.0002375	0.000287131
714	0.0001993	0.000239042
715	0.0001692	0.000202247
716	0.0002423	0.000264588
717	0.0002007	0.000216611
718	0.0002396	0.000248518
719	0.0001966	0.000200969
720	0.0001478	0.000182308
721	0.0001669	0.000186003
722	0.0001411	0.000157283
723	0.0001585	0.000167794
724	0.0001332	0.000140913
725	0.0001824	0.000188369
726	0.0001504	0.000154449
727	0.0001259	0.000129024
728	0.0001455	0.000173441
729	0.0001262	0.00015045
730	0.0001685	0.000180746
731	0.0001432	0.000153203
732	0.000123	0.000131577
733	0.0001635	0.000166021
734	0.0001378	0.000139552
735	0.0001175	0.000119008
736	0.0002731	0.000287498
737	0.0002159	0.000221853
738	0.0002343	0.000236079
739	0.000228	0.000225968
740	0.0001779	0.000213024
741	0.0001855	0.000198606
742	0.0001741	0.000176612
743	0.000143	0.000144063
744	0.0001192	0.000119837
745	0.0001906	0.000189063
746	0.0001574	0.000154962
747	0.0001318	0.000129414
748	0.0001118	0.000109762
749	0.0001842	0.000179513
750	0.0001512	0.000146188
751	0.000126	0.000121441
752	0.0001064	0.000102544
753	0.0001532	0.000181941
754	0.0001332	0.000157276
755	0.0001169	0.000137364
756	0.0001033	0.000121048
757	0.000158	0.000167002
758	0.0001359	0.000142467
759	0.0001179	0.000123024
760	0.0001031	0.000107346
761	0.0001866	0.000188164
762	0.0001574	0.000156404
763	0.0001342	0.000132141

No.	ec(given)	ec(regressed)
764	0.0001154	0.000113172
765	0.0001002	9.80515E-05
766	0.0001849	0.000179984
767	0.0001547	0.000148232
768	0.0001308	0.000124282
769	0.0001117	0.000105756
770	0.00009637	9.11214E-05
771	0.0001819	0.00017327
772	0.000151	0.000141609
773	0.0001268	0.00011798
774	0.0001077	9.98614E-05
775	0.00009247	8.56543E-05
776	0.0001276	0.000154736
777	0.0001127	0.000135295
778	0.0001003	0.00011934
779	0.00008982	0.000106078
780	0.00008088	9.49325E-05
781	0.0001353	0.000145805
782	0.0001186	0.000125691
783	0.0001046	0.000109511
784	0.0000928	9.62961E-05
785	0.00008278	8.53584E-05
786	0.0001381	0.000139244
787	0.0001202	0.000118766
788	0.0001051	0.000102539
789	0.00009248	8.94542E-05
790	0.00008187	7.87449E-05
791	0.0001386	0.000134047
792	0.0001197	0.000113361
793	0.0001039	9.71627E-05
794	0.00009081	8.42345E-05
795	0.00007988	7.37463E-05
796	0.0001379	0.000129742
797	0.0001182	0.000108936
798	0.000102	9.28059E-05
799	0.00008857	8.00408E-05
800	0.00007749	6.97602E-05
801	0.0007309	0.000710837
802	0.0006158	0.000597727
803	0.0005235	0.000510085
804	0.0004494	0.000440724
805	0.000658	0.000658005
806	0.0005431	0.000544419
807	0.0004541	0.000458378
808	0.0006013	0.000620138
809	0.0004893	0.000507022
810	0.0004048	0.000422741
811	0.0005565	0.000590706
812	0.0004484	0.000478424
813	0.0005203	0.0005667
814	0.0005343	0.000527769

No.	ec(given)	ec(regressed)
815	0.0004676	0.000454828
816	0.0004954	0.000494046
817	0.0004618	0.000469504
818	0.0004333	0.000450206
819	0.0003895	0.000384842
820	0.0003847	0.000391561
821	0.0003298	0.000338586
822	0.0003401	0.000358177
823	0.0002896	0.000307572
824	0.0004098	0.00039628
825	0.0003608	0.000348535
826	0.0003193	0.000309064
827	0.0004242	0.000419442
828	0.000365	0.000360813
829	0.0003164	0.00031386
830	0.0002763	0.000275648
831	0.0003891	0.000394199
832	0.000416	0.000455403
833	0.0004091	0.000434316
834	0.0003681	0.000395848
835	0.0003075	0.000333261
836	0.0002606	0.000284639
837	0.0003397	0.000374428
838	0.0002825	0.000313588
839	0.0002386	0.000266665
840	0.0003304	0.000335935
841	0.0002834	0.000289887
842	0.0002453	0.000252834
843	0.0003606	0.000374649
844	0.0003033	0.000316913
845	0.0002581	0.000271755
846	0.0002221	0.000235738
847	0.0003372	0.00035875
848	0.0002815	0.000301602
849	0.0002382	0.000257287
850	0.0002039	0.000222199
851	0.0003708	0.000383949
852	0.0003374	0.000338388
853	0.0003057	0.00030061
854	0.0002768	0.00026892
855	0.000251	0.000242064
856	0.0003538	0.000363081
857	0.0003157	0.000315692
858	0.000281	0.000277149
859	0.0002503	0.000245361
860	0.0002237	0.000218821
861	0.0003372	0.000347685
862	0.0002962	0.000299246
863	0.0002599	0.000260414
864	0.0002288	0.000228785
865	0.0002023	0.000202666

No.	ec(given)	ec(regressed)
866	0.0003221	0.000335447
867	0.0002792	0.000286356
868	0.0002423	0.000247454
869	0.0002113	0.000216082
870	0.0001852	0.000190397
871	0.0003084	0.000325282
872	0.0002644	0.000275771
873	0.0002274	0.000236915
874	0.0001968	0.000205838
875	0.0001714	0.000180576
876	0.0002466	0.000274171
877	0.0002323	0.000246532
878	0.000217	0.000222933
879	0.000202	0.000202615
880	0.000188	0.000184991
881	0.000241	0.000261619
882	0.0002234	0.000232432
883	0.0002058	0.000207939
884	0.0001889	0.000187176
885	0.0001731	0.000169415
886	0.0002338	0.000252242
887	0.0002142	0.000222068
888	0.0001949	0.000197075
889	0.0001767	0.000176131
890	0.0001601	0.000158399
891	0.0002271	0.000244718
892	0.0002056	0.000213855
893	0.000185	0.00018856
894	0.000166	0.000167558
895	0.000149	0.000149923
896	0.0002207	0.000238418
897	0.0001978	0.00020705
898	0.0001762	0.000181568
899	0.0001568	0.000160575
900	0.0001396	0.000143066
901	0.0005552	0.00053072
902	0.0004673	0.000445794
903	0.0003973	0.000380059
904	0.0005121	0.000491041
905	0.0004233	0.000405803
906	0.0003546	0.00034131
907	0.0004749	0.000462613
908	0.0003875	0.000377763
909	0.0004438	0.000440526
910	0.0003586	0.000356329
911	0.0004083	0.000393317
912	0.0003555	0.00033865
913	0.0003869	0.000368036
914	0.0003655	0.000349645
915	0.0003413	0.000328086
916	0.0002961	0.000286248

No.	ec(given)	ec(regressed)
917	0.0003008	0.000291277
918	0.0002581	0.000251647
919	0.0003212	0.000314618
920	0.0002701	0.000266299
921	0.0002302	0.000228463
922	0.0003108	0.000294809
923	0.0002734	0.000259087
924	0.000242	0.000229578
925	0.0003307	0.000312148
926	0.0002845	0.00026827
927	0.0002467	0.000233162
928	0.0004179	0.000422516
929	0.0003351	0.000339081
930	0.0003461	0.000335188
931	0.000295	0.000294486
932	0.0002467	0.000247665
933	0.0002092	0.000211329
934	0.0002741	0.000278456
935	0.0002281	0.000232959
936	0.0001927	0.000197907
937	0.0002157	0.000204614
938	0.0003079	0.000293251
939	0.0002617	0.000249665
940	0.0002247	0.00021525
941	0.0001948	0.000187581
942	0.0002883	0.000278621
943	0.0002428	0.000235444
944	0.0002069	0.000201707
945	0.0001782	0.000174824
946	0.000329	0.000323286
947	0.0002715	0.000266727
948	0.000227	0.000224002
949	0.0001923	0.000190905
950	0.0001649	0.000164724
951	0.0002853	0.00028558
952	0.0002572	0.000251499
953	0.0002317	0.000223261
954	0.0002091	0.00019959
955	0.0001893	0.000179543
956	0.0002772	0.000269967
957	0.0002459	0.000234532
958	0.0002182	0.000205735
959	0.0001942	0.000182004
960	0.0001735	0.000162205
961	0.0002672	0.000258451
962	0.0002338	0.000222241
963	0.0002049	0.00019324
964	0.0001804	0.000169636
965	0.0001597	0.00015016
966	0.0002572	0.0002493
967	0.0002224	0.000212612

No.	ec(given)	ec(regressed)
968	0.000193	0.000183566
969	0.0001684	0.000160162
970	0.000148	0.000141017
971	0.0002477	0.0002417
972	0.0002121	0.000204706
973	0.0001825	0.000175702
974	0.0001582	0.000152525
975	0.0001382	0.0001337
976	0.0001909	0.000203511
977	0.0001776	0.000182878
978	0.000165	0.000165271
979	0.000153	0.000150122
980	0.000141	0.00013699
981	0.000189	0.000194139
982	0.0001739	0.000172357
983	0.0001593	0.000154091
984	0.0001458	0.000138617
985	0.0001335	0.000125389
986	0.0001854	0.000187139
987	0.0001687	0.000164627
988	0.0001528	0.000145993
989	0.0001384	0.00013039
990	0.0001255	0.000117188
991	0.0001812	0.000181524
992	0.0001632	0.000158502
993	0.0001465	0.000139648
994	0.0001315	0.000124007
995	0.0001183	0.000110881
996	0.0001769	0.000176823
997	0.0001579	0.000153428
998	0.0001405	0.00013444
999	0.0001252	0.000118808
1000	0.0001118	0.00010578
1001	0.0003961	0.00039553
1002	0.0003324	0.000331883
1003	0.0002823	0.00028267
1004	0.0003782	0.000365784
1005	0.0003127	0.000301937
1006	0.0003582	0.000344482
1007	0.0002929	0.000280951
1008	0.0003397	0.000327937
1009	0.0002944	0.000292592
1010	0.000288	0.000273674
1011	0.0002424	0.000243796
1012	0.0002103	0.000212531
1013	0.0002621	0.000253683
1014	0.0002226	0.000216288
1015	0.0001911	0.000186695
1016	0.0002432	0.000233729
1017	0.0002049	0.000197633
1018	0.0001748	0.000169396

No.	ec(given)	ec(regressed)
1019	0.0002544	0.000251695
1020	0.0002216	0.000218926
1021	0.0001945	0.000192248
1022	0.0001719	0.000170228
1023	0.0002453	0.000231883
1024	0.0002754	0.000264916
1025	0.0003233	0.00031445
1026	0.000227	0.000218685
1027	0.0001901	0.000183723
1028	0.0001613	0.000156619
1029	0.0002602	0.000252017
1030	0.0002133	0.000206711
1031	0.0001778	0.00017275
1032	0.0001503	0.000146613
1033	0.0002108	0.000199105
1034	0.0001828	0.000172902
1035	0.0001598	0.000151612
1036	0.0002776	0.000259917
1037	0.0002336	0.000217763
1038	0.0001987	0.000185216
1039	0.0001707	0.000159542
1040	0.000148	0.000138919
1041	0.0002666	0.000249106
1042	0.0002222	0.000206835
1043	0.0001874	0.000174604
1044	0.0001598	0.000149446
1045	0.0001378	0.000129417
1046	0.0002561	0.000240208
1047	0.0002117	0.000197953
1048	0.0001773	0.000166069
1049	0.0001504	0.000141395
1050	0.000129	0.000121896
1051	0.0002081	0.000212032
1052	0.0001854	0.000186585
1053	0.0001658	0.000165516
1054	0.0001489	0.000147868
1055	0.0001344	0.000132932
1056	0.0002081	0.000200372
1057	0.0001832	0.000173923
1058	0.0001618	0.000152448
1059	0.0001437	0.000134764
1060	0.0001283	0.000120022
1061	0.0002042	0.000191774
1062	0.0001777	0.000164756
1063	0.0001554	0.000143135
1064	0.0001367	0.000125554
1065	0.000121	0.000111058
1066	0.000199	0.000184943
1067	0.0001715	0.000157575
1068	0.0001487	0.000135928
1069	0.0001298	0.000118501

No.	ec(given)	ec(regressed)
1070	0.0001141	0.000104256
1071	0.0001935	0.000179272
1072	0.0001654	0.000151681
1073	0.0001422	0.00013007
1074	0.0001233	0.000112817
1075	0.0001078	9.88156E-05
1076	0.000141	0.000150791
1077	0.0001292	0.000135415
1078	0.000119	0.000122304
1079	0.000109	0.000111029
1080	0.0001	0.000101261
1081	0.000143	0.000143805
1082	0.0001302	0.00012758
1083	0.0001184	0.000113983
1084	0.0001078	0.000102472
1085	0.00009835	9.26374E-05
1086	0.0001426	0.00013859
1087	0.0001286	0.000121824
1088	0.0001158	0.000107958
1089	0.0001046	9.63544E-05
1090	0.00009464	8.65437E-05
1091	0.0001409	0.000134407
1092	0.0001259	0.000117265
1093	0.0001126	0.000103238
1094	0.0001008	9.16099E-05
1095	0.00009064	8.18587E-05
1096	0.0001386	0.000130905
1097	0.000123	0.000113489
1098	0.0001091	9.93651E-05
1099	0.0000971	8.77469E-05
1100	0.00008677	7.80713E-05
1101	0.0002231	0.000267417
1102	0.0001859	0.000224069
1103	0.0002256	0.000247151
1104	0.000186	0.000203697
1105	0.0002219	0.000232645
1106	0.0001687	0.000197342
1107	0.0001573	0.000190597
1108	0.0001348	0.000164192
1109	0.0001168	0.000142979
1110	0.0001558	0.000170905
1111	0.0001322	0.000145526
1112	0.0001136	0.000125468
1113	0.0001815	0.00018943
1114	0.0001509	0.000157359
1115	0.0001272	0.000132879
1116	0.0001086	0.000113755
1117	0.000144	0.000169554
1118	0.0001244	0.000147316
1119	0.0001087	0.000129231
1120	0.00009581	0.000114318

No.	ec(given)	ec(regressed)
1121	0.0002163	0.000221384
1122	0.0002101	0.000212207
1123	0.0001757	0.000178534
1124	0.0001452	0.000147152
1125	0.0001218	0.000123456
1126	0.0001035	0.000105109
1127	0.0001697	0.000169773
1128	0.0001395	0.000139033
1129	0.0001165	0.000116026
1130	0.00009868	9.83431E-05
1131	0.0001747	0.000184484
1132	0.0001476	0.000156106
1133	0.0001262	0.000133877
1134	0.0001092	0.000116128
1135	0.00009535	0.000101723
1136	0.0001747	0.000175139
1137	0.0001464	0.000146527
1138	0.0001242	0.000124466
1139	0.0001066	0.000107087
1140	0.00009248	9.31424E-05
1141	0.0001724	0.000167797
1142	0.0001434	0.000139117
1143	0.0001209	0.000117281
1144	0.0001031	0.000100258
1145	0.00008896	8.67227E-05
1146	0.000169	0.000161756
1147	0.0001397	0.000133096
1148	0.0001171	0.000111503
1149	0.00009943	9.4816E-05
1150	0.0000854	8.1645E-05
1151	0.0001216	0.000142641
1152	0.0001063	0.000125394
1153	0.00009398	0.000111129
1154	0.00008376	9.91912E-05
1155	0.00007518	8.9097E-05
1156	0.0001283	0.000134736
1157	0.0001114	0.00011682
1158	0.00009757	0.000102289
1159	0.00008618	9.03351E-05
1160	0.00007668	8.03794E-05
1161	0.0001304	0.000128909
1162	0.0001123	0.000110615
1163	0.00009767	9.59919E-05
1164	0.00008564	8.41143E-05
1165	0.00007566	7.43308E-05
1166	0.0001303	0.000124282
1167	0.0001115	0.000105756
1168	0.00009631	9.11214E-05
1169	0.00008392	7.9353E-05
1170	0.00007372	6.9744E-05
1171	0.0001292	0.000120441

No.	ec(given)	ec(regressed)
1172	0.0001098	0.00010177
1173	0.00009431	8.71644E-05
1174	0.00008174	7.55178E-05
1175	0.00007145	6.60766E-05
1176	0.00008418	0.000101168
1177	0.00007538	9.0775E-05
1178	0.0000681	8.19201E-05
1179	0.0000619	7.43118E-05
1180	0.0000565	6.77251E-05
1181	0.00009001	9.64448E-05
1182	0.00008025	8.54823E-05
1183	0.00007201	7.63042E-05
1184	0.00006498	6.85409E-05
1185	0.00005894	6.1914E-05
1186	0.00009257	9.29201E-05
1187	0.00008211	8.15961E-05
1188	0.00007323	7.224E-05
1189	0.00006567	6.44181E-05
1190	0.00005919	5.78105E-05
1191	0.00009355	9.00935E-05
1192	0.00008254	7.85191E-05
1193	0.00007318	6.90579E-05
1194	0.00006525	6.1222E-05
1195	0.00005849	5.46572E-05
1196	0.00009366	8.77283E-05
1197	0.00008219	7.59713E-05
1198	0.00007249	6.6447E-05
1199	0.00006429	5.86206E-05
1200	0.00005735	5.21091E-05
1201	0.0005434	0.000533358
1202	0.000469	0.000459274
1203	0.0004972	0.000499095
1204	0.0004209	0.000423368
1205	0.0004595	0.000474173
1206	0.0004289	0.000454583
1207	0.0004072	0.000399878
1208	0.0003561	0.000351489
1209	0.0003137	0.000311521
1210	0.0003597	0.000363929
1211	0.0003104	0.000316376
1212	0.0002704	0.00027771
1213	0.0003838	0.000397768
1214	0.0003841	0.000388275
1215	0.000344	0.000341952
1216	0.000308	0.000303581
1217	0.0003619	0.000367051
1218	0.0004036	0.000438457
1219	0.0003245	0.000338727
1220	0.0002776	0.000292115
1221	0.0002401	0.00025464
1222	0.0003547	0.00037795

No.	ec(given)	ec(regressed)
1223	0.0002976	0.000319466
1224	0.000253	0.000273772
1225	0.0002177	0.000237361
1226	0.0003312	0.000361838
1227	0.0002763	0.000303968
1228	0.0002339	0.000259142
1229	0.0002004	0.000223681
1230	0.0002764	0.000271425
1231	0.000249	0.000244196
1232	0.000318	0.000318895
1233	0.00028	0.000279773
1234	0.0002476	0.000247538
1235	0.0002201	0.000220649
1236	0.0003416	0.000351399
1237	0.0002958	0.000302197
1238	0.0002572	0.000262799
1239	0.000225	0.000230741
1240	0.0001981	0.000204291
1241	0.0003238	0.000338963
1242	0.0002771	0.000289114
1243	0.0002387	0.00024966
1244	0.0002071	0.000217874
1245	0.0001811	0.000191874
1246	0.0003082	0.000328635
1247	0.0002613	0.000278374
1248	0.0002233	0.000238979
1249	0.0001926	0.000207502
1250	0.0001675	0.000181938
1251	0.000259	0.000277428
1252	0.0002402	0.0002493
1253	0.000222	0.000225305
1254	0.0002048	0.000204665
1255	0.0001889	0.000186775
1256	0.0002503	0.00026465
1257	0.0002286	0.000234961
1258	0.000208	0.000210072
1259	0.0001892	0.000188992
1260	0.0001721	0.000170975
1261	0.0002412	0.000255109
1262	0.0002174	0.000224427
1263	0.0001954	0.00019904
1264	0.0001756	0.000177786
1265	0.0001581	0.000159806
1266	0.000233	0.000247454
1267	0.000207	0.000216082
1268	0.000184	0.000190397
1269	0.0001641	0.000169092
1270	0.0001465	0.000151217
1271	0.0002247	0.000241047
1272	0.0001982	0.000209169
1273	0.0001747	0.000183301

No.	ec(given)	ec(regressed)
1274	0.0001539	0.000162012
1275	0.0001368	0.000144271
1276	0.0001685	0.000194915
1277	0.000161	0.00017828
1278	0.0001529	0.000163715
1279	0.0001447	0.000150888
1280	0.0001366	0.000139531
1281	0.0001658	0.000187414
1282	0.0001567	0.000169619
1283	0.0001471	0.000154277
1284	0.0001375	0.000140951
1285	0.0001282	0.0001293
1286	0.0001624	0.000181752
1287	0.0001519	0.000163175
1288	0.0001411	0.000147342
1289	0.0001305	0.000133734
1290	0.0001203	0.000121949
1291	0.0001589	0.000177172
1292	0.0001472	0.000158019
1293	0.0001354	0.000141849
1294	0.000124	0.000128068
1295	0.0001134	0.000116225
1296	0.0001555	0.000173311
1297	0.0001428	0.000153712
1298	0.0001302	0.000137298
1299	0.0001183	0.000123409
1300	0.0001072	0.000111549
1301	0.0004163	0.000397509
1302	0.0003577	0.000341981
1303	0.0003894	0.000371821
1304	0.0003647	0.000353144
1305	0.0003099	0.000297502
1306	0.0002706	0.000261296
1307	0.0002382	0.000231414
1308	0.0003291	0.000315088
1309	0.0002811	0.000270601
1310	0.0002425	0.000235043
1311	0.0002113	0.000206154
1312	0.0002964	0.000288817
1313	0.0003434	0.000338467
1314	0.0003045	0.000295922
1315	0.0002575	0.000251752
1316	0.0002203	0.000216913
1317	0.0001906	0.000188929
1318	0.0002841	0.000281091
1319	0.0002384	0.000237353
1320	0.0002028	0.000203213
1321	0.0001745	0.000176035
1322	0.0003253	0.000326388
1323	0.0002671	0.000269037
1324	0.0002229	0.00022577

No.	ec(given)	ec(regressed)
1325	0.0001887	0.00019229
1326	0.0001617	0.00016583
1327	0.0002632	0.000254163
1328	0.0002344	0.000225481
1329	0.0002096	0.00020146
1330	0.0001884	0.000181135
1331	0.0002846	0.000272937
1332	0.0002488	0.000236926
1333	0.0002184	0.000207695
1334	0.0001928	0.000183628
1335	0.0001713	0.000163568
1336	0.0002717	0.000261229
1337	0.0002345	0.000224446
1338	0.0002036	0.00019502
1339	0.000178	0.000171096
1340	0.0001569	0.000151371
1341	0.0002596	0.000251928
1342	0.0002217	0.000214672
1343	0.0001908	0.000185212
1344	0.0001656	0.000161499
1345	0.000145	0.000142118
1346	0.0002486	0.000244207
1347	0.0002105	0.00020665
1348	0.0001798	0.000177241
1349	0.0001552	0.000153765
1350	0.0001352	0.000134715
1351	0.000201	0.000205944
1352	0.0001843	0.000184944
1353	0.0001689	0.000167041
1354	0.0001549	0.00015165
1355	0.0001424	0.000138319
1356	0.0001974	0.000196402
1357	0.0001788	0.000174244
1358	0.0001618	0.000155682
1359	0.0001466	0.00013997
1360	0.0001333	0.00012655
1361	0.0001921	0.000189279
1362	0.000172	0.000166386
1363	0.000154	0.000147458
1364	0.0001382	0.000131622
1365	0.0001245	0.000118236
1366	0.0001864	0.000183566
1367	0.000165	0.000160162
1368	0.000147	0.000141017
1369	0.0001306	0.000125148
1370	0.0001168	0.000111844
1371	0.0001809	0.000178785
1372	0.000159	0.000155008
1373	0.00014	0.000135731
1374	0.0001238	0.000119877
1375	0.00011	0.000106676

No.	ec(given)	ec(regressed)
1376	0.0001314	0.000144383
1377	0.0001239	0.00013199
1378	0.0001166	0.000121145
1379	0.0001096	0.000111599
1380	0.000103	0.000103151
1381	0.0001311	0.000138794
1382	0.0001226	0.000125541
1383	0.0001143	0.000114121
1384	0.0001064	0.000104207
1385	0.000099	9.55445E-05
1386	0.0001295	0.000134577
1387	0.0001201	0.000120743
1388	0.000111	0.000108961
1389	0.0001024	9.88405E-05
1390	0.00009446	9.00811E-05
1391	0.0001274	0.000131165
1392	0.0001172	0.000116905
1393	0.0001075	0.000104875
1394	0.00009838	9.46286E-05
1395	0.00009009	8.58281E-05
1396	0.0001251	0.00012829
1397	0.0001143	0.0001137
1398	0.000104	0.00010149
1399	0.00009459	9.1166E-05
1400	0.00008606	8.2355E-05
1401	0.0003003	0.000295729
1402	0.00029	0.000276505
1403	0.0002565	0.000254185
1404	0.0002213	0.000220938
1405	0.0001929	0.000193898
1406	0.0001696	0.000171598
1407	0.0002445	0.00023408
1408	0.0002086	0.000200845
1409	0.0001798	0.000174305
1410	0.0001566	0.00015276
1411	0.0002771	0.000262534
1412	0.0002312	0.000219758
1413	0.0001955	0.000186774
1414	0.0001673	0.000160782
1415	0.0001447	0.000139924
1416	0.0002645	0.000251557
1417	0.000219	0.000208679
1418	0.0001839	0.000176028
1419	0.0001564	0.000150569
1420	0.0001346	0.000130318
1421	0.000253	0.000242527
1422	0.0002081	0.000199678
1423	0.0001738	0.000167388
1424	0.0001471	0.000142427
1425	0.0001261	0.00012272
1426	0.0002165	0.00021445

No.	ec(given)	ec(regressed)
1427	0.0001902	0.000188573
1428	0.0001682	0.000167172
1429	0.0001498	0.000149262
1430	0.0001343	0.000134117
1431	0.0002141	0.00020259
1432	0.0001859	0.00017571
1433	0.0001625	0.000153909
1434	0.0001432	0.000135974
1435	0.000127	0.000121036
1436	0.0002082	0.000193848
1437	0.0001789	0.0001664
1438	0.0001549	0.000144462
1439	0.0001353	0.00012664
1440	0.0001191	0.000111959
1441	0.0002014	0.000186905
1442	0.0001715	0.000159111
1443	0.0001474	0.000137154
1444	0.0001279	0.000119496
1445	0.0001119	0.000105075
1446	0.0001947	0.000181142
1447	0.0001646	0.00015313
1448	0.0001405	0.000131217
1449	0.0001213	0.00011374
1450	0.0001056	9.95701E-05
1451	0.0001487	0.000152604
1452	0.0001344	0.000136954
1453	0.0001219	0.000123621
1454	0.000111	0.000112166
1455	0.0001015	0.00010225
1456	0.0001499	0.000145492
1457	0.0001343	0.000128985
1458	0.0001206	0.000115166
1459	0.0001088	0.000103478
1460	0.00009856	9.35004E-05
1461	0.0001482	0.000140184
1462	0.0001316	0.000123134
1463	0.0001172	0.000109047
1464	0.0001048	9.72706E-05
1465	0.00009422	8.73218E-05
1466	0.000145	0.000135928
1467	0.000128	0.000118501
1468	0.000113	0.000104256
1469	0.0001005	9.24584E-05
1470	0.0000898	8.25738E-05
1471	0.0001423	0.000132367
1472	0.0001244	0.000114665
1473	0.0001092	0.000100325
1474	0.00009641	8.85416E-05
1475	0.00008566	7.87367E-05
1476	0.00009824	0.00010676
1477	0.00009112	9.75441E-05

No.	ec(given)	ec(regressed)
1478	0.00008464	8.94838E-05
1479	0.00007878	8.23923E-05
1480	0.00007348	7.61193E-05
1481	0.0001004	0.000102603
1482	0.0000926	9.27504E-05
1483	0.00008544	8.42649E-05
1484	0.00007894	7.69033E-05
1485	0.00007307	7.04743E-05
1486	0.0001005	9.94672E-05
1487	0.00009214	8.9185E-05
1488	0.00008444	8.0433E-05
1489	0.00007747	7.29201E-05
1490	0.00007122	6.64213E-05
1491	0.00009979	9.69308E-05
1492	0.00009092	8.63335E-05
1493	0.00008278	7.73991E-05
1494	0.00007547	6.97947E-05
1495	0.00006896	6.32672E-05
1496	0.00009869	9.47932E-05
1497	0.00008938	8.39528E-05
1498	0.00008089	7.48869E-05
1499	0.00007332	6.7226E-05
1500	0.00006663	6.06922E-05
1501	0.0001717	0.000199475
1502	0.0001443	0.000171246
1503	0.0001245	0.000148681
1504	0.000108	0.000130348
1505	0.00009468	0.000115245
1506	0.0001752	0.000186408
1507	0.0001469	0.000157597
1508	0.0001249	0.000135056
1509	0.0001074	0.000117078
1510	0.0000934	0.0001025
1511	0.0001736	0.000176916
1512	0.0001445	0.00014788
1513	0.000122	0.000125522
1514	0.0001043	0.000107926
1515	0.00009016	9.38213E-05
1516	0.0001701	0.000169461
1517	0.0001407	0.000140367
1518	0.0001182	0.000118245
1519	0.0001005	0.000101017
1520	0.00008652	8.73318E-05
1521	0.000166	0.00016333
1522	0.0001366	0.000134265
1523	0.0001142	0.000112396
1524	0.00009676	9.55136E-05
1525	0.00008298	8.22007E-05
1526	0.0001265	0.00014428
1527	0.0001093	0.000126741
1528	0.00009566	0.00011225

No.	ec(given)	ec(regressed)
1529	0.00008456	0.000100134
1530	0.00007538	8.98977E-05
1531	0.000132	0.000136239
1532	0.0001132	0.000118029
1533	0.00009827	0.000103277
1534	0.00008614	9.11527E-05
1535	0.00007616	8.10641E-05
1536	0.0001329	0.000130314
1537	0.0001133	0.000111727
1538	0.00009762	9.68887E-05
1539	0.00008499	8.48479E-05
1540	0.00007467	7.49388E-05
1541	0.0001319	0.000125611
1542	0.0001117	0.000106795
1543	0.00009571	9.19499E-05
1544	0.00008287	8.00245E-05
1545	0.00007244	7.02959E-05
1546	0.00013	0.000121708
1547	0.0001095	0.00010275
1548	0.00009331	8.79389E-05
1549	0.00008043	7.61405E-05
1550	0.00007001	6.65851E-05
1551	0.00008879	0.000102394
1552	0.00007852	9.18147E-05
1553	0.00007016	8.28095E-05
1554	0.00006322	7.50787E-05
1555	0.00005735	6.83912E-05
1556	0.00009425	9.75849E-05
1557	0.00008295	8.64311E-05
1558	0.00007364	7.71026E-05
1559	0.00006587	6.92192E-05
1560	0.00005932	6.24953E-05
1561	0.00009631	9.39974E-05
1562	0.0000843	8.24801E-05
1563	0.00007438	7.29747E-05
1564	0.00006612	6.50355E-05
1565	0.0000592	5.83344E-05
1566	0.0000968	9.11214E-05
1567	0.0000842	7.9353E-05
1568	0.00007391	6.9744E-05
1569	0.00006535	6.17935E-05
1570	0.00005819	5.51384E-05
1571	0.00009638	8.87153E-05
1572	0.00008346	7.67644E-05
1573	0.00007286	6.70941E-05
1574	0.00006411	5.91557E-05
1575	0.00005683	5.25567E-05
1576	0.00006002	7.14324E-05
1577	0.00005424	6.52198E-05
1578	0.00004944	5.97901E-05
1579	0.00004537	5.50163E-05

No.	ec(given)	ec(regressed)
1580	0.00004185	5.07962E-05
1581	0.00006439	6.86297E-05
1582	0.00005809	6.19901E-05
1583	0.00005274	5.62766E-05
1584	0.00004815	5.13235E-05
1585	0.00004417	4.70009E-05
1586	0.00006647	6.65158E-05
1587	0.00005977	5.95889E-05
1588	0.00005403	5.36979E-05
1589	0.00004908	4.8645E-05
1590	0.0000448	4.42774E-05
1591	0.00006743	6.48065E-05
1592	0.00006041	5.76691E-05
1593	0.00005436	5.16569E-05
1594	0.00004915	4.65442E-05
1595	0.00004465	4.2159E-05
1596	0.00006777	6.33663E-05
1597	0.00006046	5.60665E-05
1598	0.00005417	4.99674E-05
1599	0.00004877	4.4818E-05
1600	0.00004412	4.043E-05
1601	0.0004192	0.000415833
1602	0.0003687	0.000364558
1603	0.0003256	0.000322366
1604	0.000289	0.000287211
1605	0.000258	0.000257596
1606	0.0003882	0.000392296
1607	0.0003354	0.000339174
1608	0.0002918	0.000296319
1609	0.0002557	0.000261223
1610	0.0002257	0.000232102
1611	0.0003619	0.000374985
1612	0.0003088	0.000320848
1613	0.0002658	0.000277814
1614	0.0002309	0.000243015
1615	0.0002023	0.000214458
1616	0.0003401	0.000361262
1617	0.0002874	0.000306526
1618	0.0002455	0.000263527
1619	0.0002119	0.000229106
1620	0.0001846	0.000201103
1621	0.0003217	0.000349886
1622	0.0002698	0.000294793
1623	0.0002291	0.000251938
1624	0.0001968	0.000217918
1625	0.0001707	0.00019044
1626	0.0002894	0.000298246
1627	0.0002636	0.000266925
1628	0.0002399	0.000240365
1629	0.0002185	0.000217638
1630	0.0001994	0.000198034

No.	ec(given)	ec(regressed)
1631	0.0002757	0.000283993
1632	0.0002471	0.000251036
1633	0.0002214	0.000223581
1634	0.0001989	0.000200459
1635	0.0001792	0.000180795
1636	0.0002626	0.000273377
1637	0.0002322	0.000239395
1638	0.0002056	0.000211465
1639	0.0001828	0.000188217
1640	0.0001631	0.000168652
1641	0.0002508	0.000264877
1642	0.0002193	0.000230195
1643	0.0001924	0.000201996
1644	0.0001696	0.000178745
1645	0.0001503	0.00015934
1646	0.0002402	0.000257773
1647	0.0002082	0.000222588
1648	0.0001813	0.000194238
1649	0.0001587	0.000171047
1650	0.0001398	0.000151825
1651	0.0001914	0.000210255
1652	0.0001799	0.000191633
1653	0.0001685	0.000175414
1654	0.0001575	0.000161197
1655	0.000147	0.000148663
1656	0.0001865	0.000201846
1657	0.0001731	0.000181979
1658	0.00016	0.000164946
1659	0.0001476	0.000150227
1660	0.0001361	0.000137418
1661	0.000181	0.000195512
1662	0.0001661	0.000174814
1663	0.0001518	0.000157278
1664	0.0001386	0.000142286
1665	0.0001264	0.000129365
1666	0.0001757	0.000190397
1667	0.0001596	0.000169092
1668	0.0001445	0.000151217
1669	0.0001306	0.000136067
1670	0.0001182	0.000123111
1671	0.000171	0.00018609
1672	0.000154	0.000164321
1673	0.000138	0.000146205
1674	0.000124	0.000130963
1675	0.000111	0.000118012
1676	0.0001224	0.000145953
1677	0.0001179	0.000135145
1678	0.0001131	0.000125509
1679	0.0001081	0.00011688
1680	0.0001031	0.000109122
1681	0.000121	0.000141105

No.	ec(given)	ec(regressed)
1682	0.0001156	0.000129436
1683	0.0001098	0.000119173
1684	0.0001039	0.000110098
1685	0.0000979	0.000102033
1686	0.000119	0.000137418
1687	0.000113	0.000125149
1688	0.000106	0.00011447
1689	0.0000995	0.000105117
1690	0.0000929	9.6877E-05
1691	0.000117	0.000134418
1692	0.00011	0.000121694
1693	0.0001026	0.000110714
1694	0.00009533	0.000101172
1695	0.00008826	9.28248E-05
1696	0.0001149	0.000131876
1697	0.0001072	0.000118792
1698	0.00009929	0.000107583
1699	0.00009151	9.79051E-05
1700	0.00008408	8.94897E-05
1701	0.0003233	0.000309446
1702	0.0002825	0.000271071
1703	0.0002483	0.00023952
1704	0.0002198	0.000213251
1705	0.0001959	0.000191136
1706	0.0003054	0.000291827
1707	0.0002629	0.000252086
1708	0.0002282	0.000220055
1709	0.0001997	0.000193843
1710	0.0001761	0.000172111
1711	0.0002882	0.000278873
1712	0.0002453	0.000238386
1713	0.0002109	0.000206232
1714	0.0001831	0.000180253
1715	0.0001604	0.000158952
1716	0.000273	0.000268606
1717	0.0002303	0.000227681
1718	0.0001966	0.000195564
1719	0.0001697	0.000169876
1720	0.0001479	0.000148995
1721	0.0002598	0.000260097
1722	0.0002177	0.000218914
1723	0.0001847	0.000186912
1724	0.0001587	0.000161531
1725	0.0001377	0.000141049
1726	0.0002248	0.000221494
1727	0.0002027	0.000198101
1728	0.0001831	0.000178276
1729	0.0001659	0.000161323
1730	0.000151	0.000146708
1731	0.0002178	0.000210847
1732	0.0001938	0.000186239

No.	ec(given)	ec(regressed)
1733	0.0001728	0.000165755
1734	0.0001548	0.000148515
1735	0.0001394	0.000133864
1736	0.0002096	0.000202918
1737	0.0001843	0.000177552
1738	0.0001628	0.00015672
1739	0.0001445	0.000139393
1740	0.000129	0.000124821
1741	0.0002016	0.000196571
1742	0.0001756	0.000170688
1743	0.0001538	0.000149661
1744	0.0001355	0.000132337
1745	0.0001203	0.000117889
1746	0.0001941	0.000191268
1747	0.0001677	0.000165014
1748	0.0001459	0.000143879
1749	0.0001279	0.000126604
1750	0.0001129	0.000112297
1751	0.0001495	0.000155818
1752	0.0001388	0.000141938
1753	0.0001287	0.000129856
1754	0.0001195	0.000119271
1755	0.0001112	0.000109944
1756	0.0001478	0.000149549
1757	0.0001359	0.000134746
1758	0.0001248	0.000122062
1759	0.0001147	0.000111107
1760	0.0001055	0.00010158
1761	0.0001447	0.000144829
1762	0.0001318	0.000129409
1763	0.0001199	0.000116354
1764	0.0001092	0.0001052
1765	0.00009971	9.55927E-05
1766	0.0001413	0.000141017
1767	0.0001276	0.000125148
1768	0.0001152	0.000111844
1769	0.0001041	0.000100575
1770	0.00009437	9.0944E-05
1771	0.000138	0.000137808
1772	0.000124	0.000121596
1773	0.000111	0.000108115
1774	0.0000994	9.67802E-05
1775	0.0000896	8.71556E-05
1776	0.00009634	0.000107928
1777	0.00009169	9.98897E-05
1778	0.0000871	9.27266E-05
1779	0.00008267	8.63149E-05
1780	0.00007843	8.05523E-05
1781	0.00009651	0.000104322
1782	0.0000913	9.56451E-05
1783	0.00008611	8.80183E-05

No.	ec(given)	ec(regressed)
1784	0.00008108	8.12774E-05
1785	0.0000763	7.52893E-05
1786	0.0000957	0.00010158
1787	0.00009	9.24586E-05
1788	0.0000842	8.45244E-05
1789	0.0000787	7.75788E-05
1790	0.0000735	7.1463E-05
1791	0.00009454	9.93492E-05
1792	0.0000883	8.98914E-05
1793	0.00008213	8.17352E-05
1794	0.00007624	7.46506E-05
1795	0.00007071	6.84565E-05
1796	0.00009324	9.74594E-05
1797	0.00008654	8.77349E-05
1798	0.00007999	7.94097E-05
1799	0.00007379	7.22259E-05
1800	0.00006803	6.59826E-05
1801	0.0002353	0.000229863
1802	0.0002039	0.000201197
1803	0.0001783	0.000177645
1804	0.0001573	0.000158051
1805	0.0001398	0.000141568
1806	0.000229	0.000216698
1807	0.0001963	0.000187023
1808	0.0001699	0.000163125
1809	0.0001483	0.000143585
1810	0.0001307	0.000127396
1811	0.0002202	0.000207023
1812	0.000187	0.000176799
1813	0.0001605	0.000152818
1814	0.0001391	0.00013346
1815	0.0001218	0.0001176
1816	0.0002112	0.000199356
1817	0.000178	0.000168813
1818	0.0001518	0.000144867
1819	0.0001309	0.000125732
1820	0.000114	0.000110191
1821	0.0002029	0.000193003
1822	0.0001699	0.000162274
1823	0.0001442	0.000138421
1824	0.0001238	0.00011952
1825	0.0001074	0.00010428
1826	0.0001659	0.000164199
1827	0.0001477	0.000146758
1828	0.0001322	0.000131987
1829	0.0001191	0.000119365
1830	0.0001079	0.00010849
1831	0.0001652	0.000156259
1832	0.0001457	0.000137919
1833	0.0001291	0.000122664
1834	0.0001152	0.000109834

No.	ec(given)	ec(regressed)
1835	0.0001034	9.89369E-05
1836	0.0001616	0.000150348
1837	0.0001412	0.000131449
1838	0.0001242	0.000115939
1839	0.0001099	0.000103049
1840	0.00009795	9.22152E-05
1841	0.0001572	0.000145618
1842	0.0001363	0.000126337
1843	0.000119	0.000110686
1844	0.0001047	9.78019E-05
1845	0.00009276	8.7064E-05
1846	0.0001527	0.000141666
1847	0.0001315	0.000122113
1848	0.0001141	0.000106385
1849	0.00009984	9.35406E-05
1850	0.00008807	8.29102E-05
1851	0.0001116	0.000115267
1852	0.000102	0.000104941
1853	0.00009355	9.59573E-05
1854	0.00008609	8.80908E-05
1855	0.00007951	8.11627E-05
1856	0.0001131	0.000110603
1857	0.0001027	9.95928E-05
1858	0.00009345	9.01646E-05
1859	0.00008531	8.2027E-05
1860	0.00007816	7.49532E-05
1861	0.0001124	0.000107091
1862	0.0001013	9.56251E-05
1863	0.00009153	8.59239E-05
1864	0.00008296	7.76406E-05
1865	0.00007548	7.05101E-05
1866	0.0001108	0.000104256
1867	0.00009923	9.24584E-05
1868	0.00008904	8.25738E-05
1869	0.0000802	7.42073E-05
1870	0.00007254	6.70613E-05
1871	0.000109	0.00010187
1872	0.0000969	8.98188E-05
1873	0.0000864	7.9805E-05
1874	0.0000774	7.13912E-05
1875	0.00006968	6.42516E-05
1876	0.00007262	7.96658E-05
1877	0.00006795	7.36988E-05
1878	0.00006369	6.83836E-05
1879	0.00005981	6.36282E-05
1880	0.00005628	5.9356E-05
1881	0.0000744	7.69885E-05
1882	0.00006938	7.05489E-05
1883	0.00006472	6.48914E-05
1884	0.00006043	5.98934E-05
1885	0.0000565	5.54557E-05

No.	ec(given)	ec(regressed)
1886	0.0000747	7.49534E-05
1887	0.0000694	6.81848E-05
1888	0.0000644	6.23006E-05
1889	0.0000598	5.71522E-05
1890	0.0000556	5.26212E-05
1891	0.00007446	7.32976E-05
1892	0.00006879	6.62805E-05
1893	0.00006349	6.02327E-05
1894	0.00005864	5.49825E-05
1895	0.00005423	5.03946E-05
1896	0.00007389	7.18952E-05
1897	0.00006793	6.46812E-05
1898	0.00006238	5.85091E-05
1899	0.00005733	5.31863E-05
1900	0.00005276	4.8563E-05
1901	0.0001363	0.000154736
1902	0.0001166	0.000135295
1903	0.0001012	0.00011934
1904	0.00008868	0.000106078
1905	0.00007847	9.49325E-05
1906	0.0001399	0.000145805
1907	0.0001189	0.000125691
1908	0.0001024	0.000109511
1909	0.00008907	9.62961E-05
1910	0.00007824	8.53584E-05
1911	0.0001392	0.000139244
1912	0.0001176	0.000118766
1913	0.0001007	0.000102539
1914	0.00008709	8.94542E-05
1915	0.00007609	7.87449E-05
1916	0.0001369	0.000134047
1917	0.0001151	0.000113361
1918	0.000098	9.71627E-05
1919	0.0000844	8.42345E-05
1920	0.00007344	7.37463E-05
1921	0.000134	0.000129742
1922	0.0001121	0.000108936
1923	0.00009508	9.28059E-05
1924	0.00008158	8.00408E-05
1925	0.00007074	6.97602E-05
1926	0.00009847	0.000110238
1927	0.00008604	9.84408E-05
1928	0.00007605	8.84593E-05
1929	0.00006785	7.99362E-05
1930	0.00006102	7.25987E-05
1931	0.0001033	0.000104866
1932	0.00008975	9.24668E-05
1933	0.0000788	8.21633E-05
1934	0.00006981	7.35054E-05
1935	0.00006233	6.61584E-05
1936	0.0001045	0.000100869

No.	ec(given)	ec(regressed)
1937	0.00009029	8.80953E-05
1938	0.00007881	7.76241E-05
1939	0.00006941	6.89298E-05
1940	0.00006162	6.16297E-05
1941	0.0001041	9.76704E-05
1942	0.00008948	8.46432E-05
1943	0.00007769	7.40803E-05
1944	0.00006809	6.53935E-05
1945	0.00006017	5.81608E-05
1946	0.0001029	9.49991E-05
1947	0.00008805	8.17909E-05
1948	0.00007611	7.11795E-05
1949	0.00006642	6.25224E-05
1950	0.00005846	5.53648E-05
1951	0.00006786	7.7171E-05
1952	0.00006056	7.02059E-05
1953	0.00005458	6.41506E-05
1954	0.00004958	5.88522E-05
1955	0.00004533	5.41889E-05
1956	0.00007227	7.40241E-05
1957	0.0000643	6.66004E-05
1958	0.00005768	6.02486E-05
1959	0.0000521	5.47705E-05
1960	0.00004735	5.0012E-05
1961	0.00007409	7.16557E-05
1962	0.00006567	6.39268E-05
1963	0.00005862	5.73933E-05
1964	0.00005268	5.18194E-05
1965	0.00004763	4.70249E-05
1966	0.00007469	6.9744E-05
1967	0.00006591	6.17935E-05
1968	0.00005856	5.51384E-05
1969	0.00005238	4.95105E-05
1970	0.0000471	4.47074E-05
1971	0.0000746	6.81354E-05
1972	0.0000656	6.00157E-05
1973	0.000058	5.32754E-05
1974	0.0000517	4.76172E-05
1975	0.00004631	4.282E-05
1976	0.00004511	5.31818E-05
1977	0.00004107	4.91685E-05
1978	0.0000377	4.55959E-05
1979	0.00003484	4.24013E-05
1980	0.00003236	3.9533E-05
1981	0.00004845	5.13808E-05
1982	0.00004411	4.70511E-05
1983	0.00004041	4.32497E-05
1984	0.0000372	3.98938E-05
1985	0.0000344	3.69159E-05
1986	0.0000501	5.00121E-05
1987	0.0000456	4.54623E-05

No.	ec(given)	ec(regressed)
1988	0.0000416	4.15099E-05
1989	0.0000382	3.80541E-05
1990	0.0000352	3.50147E-05
1991	0.00005095	4.88988E-05
1992	0.00004618	4.41829E-05
1993	0.00004203	4.01216E-05
1994	0.00003841	3.65984E-05
1995	0.00003525	3.35219E-05
1996	0.00005132	4.7956E-05
1997	0.00004638	4.31086E-05
1998	0.00004206	3.89646E-05
1999	0.0000383	3.53937E-05
2000	0.00003503	3.22943E-05
2001	0.000333	0.0003338
2002	0.0002974	0.000296779
2003	0.0002663	0.000265686
2004	0.0002393	0.000239309
2005	0.000216	0.000216731
2006	0.0003112	0.000316906
2007	0.0002735	0.000278144
2008	0.0002414	0.000246186
2009	0.0002143	0.000219514
2010	0.0001912	0.000197013
2011	0.0002923	0.000304374
2012	0.0002537	0.000264557
2013	0.0002217	0.000232182
2014	0.000195	0.000205487
2015	0.0001727	0.000183205
2016	0.0002761	0.000294371
2017	0.0002375	0.000253857
2018	0.0002059	0.00022128
2019	0.0001799	0.000194678
2020	0.0001584	0.000172661
2021	0.0002623	0.000286033
2022	0.0002239	0.000245036
2023	0.000193	0.000212378
2024	0.0001678	0.000185923
2025	0.000147	0.000164183
2026	0.0002261	0.000236625
2027	0.0002086	0.000214422
2028	0.0001921	0.000195248
2029	0.000177	0.000178571
2030	0.0001632	0.000163971
2031	0.000217	0.000226574
2032	0.0001974	0.000202991
2033	0.0001793	0.000182957
2034	0.0001631	0.000165788
2035	0.0001485	0.000150957
2036	0.0002081	0.000219031
2037	0.000187	0.000194542
2038	0.000168	0.000173995

No.	ec(given)	ec(regressed)
2039	0.0001512	0.000156581
2040	0.0001364	0.000141688
2041	0.0001998	0.000212955
2042	0.0001777	0.000187817
2043	0.0001582	0.000166938
2044	0.0001412	0.000149398
2045	0.0001264	0.000134518
2046	0.0001923	0.000207853
2047	0.0001695	0.000182225
2048	0.0001498	0.00016112
2049	0.0001328	0.000143523
2050	0.0001181	0.000128692
2051	0.000147	0.000165072
2052	0.00014	0.000152087
2053	0.000132	0.000140594
2054	0.000125	0.000130373
2055	0.000117	0.00012124
2056	0.000144	0.000159235
2057	0.000135	0.000145267
2058	0.000127	0.000133082
2059	0.000118	0.000122386
2060	0.00011	0.000112945
2061	0.000141	0.00015481
2062	0.000131	0.000140166
2063	0.000121	0.00012753
2064	0.000112	0.000116548
2065	0.000103	0.000106941
2066	0.000137	0.000151217
2067	0.000126	0.000136067
2068	0.000116	0.000123111
2069	0.000106	0.000111941
2070	0.00009683	0.000102241
2071	0.0001337	0.000148179
2072	0.0001221	0.000132631
2073	0.0001111	0.000119435
2074	0.0001008	0.000108137
2075	0.00009151	9.83848E-05
2076	0.00009237	0.000113523
2077	0.00008953	0.000106095
2078	0.00008642	9.93803E-05
2079	0.00008317	9.32903E-05
2080	0.00007984	8.77492E-05
2081	0.00009158	0.000110204
2082	0.00008814	0.000102127
2083	0.00008439	9.49159E-05
2084	0.0000805	8.84501E-05
2085	0.0000765	8.26296E-05
2086	0.0000904	0.000107666
2087	0.0000864	9.91272E-05
2088	0.000082	9.15757E-05
2089	0.0000776	8.48639E-05

No.	ec(given)	ec(regressed)
2090	0.0000731	7.88707E-05
2091	0.0000891	0.000105591
2092	0.0000845	9.66969E-05
2093	0.0000797	8.8892E-05
2094	0.0000748	8.20044E-05
2095	0.0000699	7.58946E-05
2096	0.0000877	0.000103827
2097	0.0000827	9.46458E-05
2098	0.0000774	8.66426E-05
2099	0.0000721	7.96227E-05
2100	0.000067	7.34303E-05
2101	0.0002581	0.000248068
2102	0.0002286	0.000220398
2103	0.0002035	0.000197176
2104	0.0001822	0.000177488
2105	0.000164	0.000160646
2106	0.0002456	0.000235439
2107	0.0002147	0.000206478
2108	0.0001889	0.00018262
2109	0.0001673	0.000162722
2110	0.0001492	0.000145947
2111	0.0002332	0.000226073
2112	0.0002017	0.000196332
2113	0.0001759	0.00017217
2114	0.0001546	0.000152263
2115	0.0001369	0.000135659
2116	0.0002219	0.000218599
2117	0.0001904	0.000188345
2118	0.0001649	0.000164039
2119	0.0001441	0.000144207
2120	0.0001269	0.000127806
2121	0.000212	0.000212371
2122	0.0001807	0.000181761
2123	0.0001556	0.0001574
2124	0.0001353	0.000137684
2125	0.0001187	0.000121493
2126	0.0001764	0.000175485
2127	0.000161	0.000158925
2128	0.0001471	0.000144632
2129	0.0001347	0.000132207
2130	0.0001238	0.000121336
2131	0.0001721	0.000167987
2132	0.0001552	0.000150403
2133	0.0001403	0.000135474
2134	0.0001271	0.000122688
2135	0.0001156	0.000111651
2136	0.0001665	0.000162362
2137	0.0001487	0.000144106
2138	0.0001331	0.000128799
2139	0.0001197	0.000115835
2140	0.000108	0.000104755

No.	ec(given)	ec(regressed)
2141	0.0001609	0.000157831
2142	0.0001425	0.000139095
2143	0.0001266	0.000123544
2144	0.000113	0.000110491
2145	0.0001013	9.94231E-05
2146	0.0001556	0.000154027
2147	0.0001368	0.000134929
2148	0.0001207	0.000119213
2149	0.0001071	0.00010612
2150	0.00009561	9.50926E-05
2151	0.000116	0.000122156
2152	0.000109	0.000112491
2153	0.000102	0.000103942
2154	0.0000952	9.63417E-05
2155	0.0000893	8.95541E-05
2156	0.000115	0.000117811
2157	0.000107	0.000107418
2158	0.0000993	9.8356E-05
2159	0.0000922	9.04059E-05
2160	0.0000857	8.33915E-05
2161	0.000113	0.000114517
2162	0.000104	0.000103623
2163	0.0000961	9.42284E-05
2164	0.0000885	8.60681E-05
2165	0.0000816	7.89335E-05
2166	0.000111	0.000111844
2167	0.000102	0.000100575
2168	0.0000928	9.0944E-05
2169	0.0000849	8.2646E-05
2170	0.00007777	7.54441E-05
2171	0.0001085	0.000109584
2172	0.0000987	9.80206E-05
2173	0.00008967	8.82132E-05
2174	0.00008153	7.98208E-05
2175	0.00007425	7.25819E-05
2176	0.00007377	8.38211E-05
2177	0.00007068	7.83048E-05
2178	0.0000676	7.33207E-05
2179	0.00006461	6.88019E-05
2180	0.00006172	6.46918E-05
2181	0.00007406	8.13561E-05
2182	0.00007064	7.53594E-05
2183	0.00006717	7.00079E-05
2184	0.0000638	6.52116E-05
2185	0.0000605	6.08958E-05
2186	0.0000736	7.94714E-05
2187	0.0000699	7.31329E-05
2188	0.000066	6.75299E-05
2189	0.0000623	6.25523E-05
2190	0.0000587	5.81096E-05
2191	0.0000729	7.7931E-05

No.	ec(given)	ec(regressed)
2192	0.0000688	7.13294E-05
2193	0.0000647	6.55393E-05
2194	0.0000606	6.04323E-05
2195	0.0000568	5.59042E-05
2196	0.0000721	7.66212E-05
2197	0.0000677	6.98075E-05
2198	0.0000633	6.38712E-05
2199	0.000059	5.8667E-05
2200	0.0000549	5.40785E-05
2201	0.0001892	0.000184024
2202	0.000166	0.000163381
2203	0.0001468	0.000146068
2204	0.0001308	0.000131401
2205	0.0001173	0.000118861
2206	0.0001852	0.0001746
2207	0.000161	0.000153002
2208	0.000141	0.000135223
2209	0.0001245	0.000120406
2210	0.0001107	0.000107923
2211	0.0001789	0.000167613
2212	0.0001542	0.00014544
2213	0.000134	0.00012744
2214	0.000118	0.000112622
2215	0.0001039	0.000100272
2216	0.0001723	0.00016204
2217	0.0001474	0.000139488
2218	0.0001274	0.000121386
2219	0.0001112	0.000106629
2220	0.00009784	9.44336E-05
2221	0.000166	0.000157395
2222	0.0001413	0.000134583
2223	0.0001215	0.000116445
2224	0.0001055	0.000101778
2225	0.00009253	8.97423E-05
2226	0.0001312	0.000129909
2227	0.0001181	0.00011758
2228	0.0001068	0.000106945
2229	0.0000971	9.77053E-05
2230	0.00008869	8.96252E-05
2231	0.0001313	0.000124326
2232	0.0001172	0.000111238
2233	0.0001051	0.000100134
2234	0.00009478	9.06303E-05
2235	0.00008588	8.24304E-05
2236	0.000129	0.000120138
2237	0.0001143	0.000106554
2238	0.0001018	9.51722E-05
2239	0.00009111	8.55387E-05
2240	0.00008201	7.73102E-05
2241	0.000126	0.000116766
2242	0.0001109	0.000102827

No.	ec(given)	ec(regressed)
2243	0.00009807	9.12665E-05
2244	0.00008728	8.15692E-05
2245	0.00007816	7.33525E-05
2246	0.0001228	0.000113935
2247	0.0001074	9.9729E-05
2248	0.00009446	8.80482E-05
2249	0.00008366	7.83237E-05
2250	0.00007458	7.0139E-05
2251	0.0000871	9.02345E-05
2252	0.0000803	8.30545E-05
2253	0.0000742	7.67065E-05
2254	0.0000689	7.10658E-05
2255	0.0000641	6.60304E-05
2256	0.0000885	8.70061E-05
2257	0.0000812	7.92871E-05
2258	0.0000747	7.25605E-05
2259	0.0000688	6.66622E-05
2260	0.0000636	6.14606E-05
2261	0.0000882	8.45595E-05
2262	0.0000805	7.64699E-05
2263	0.0000735	6.94978E-05
2264	0.0000674	6.34451E-05
2265	0.0000619	5.81561E-05
2266	0.0000873	8.25738E-05
2267	0.0000792	7.42073E-05
2268	0.0000719	6.70613E-05
2269	0.0000655	6.09079E-05
2270	0.00005987	5.55704E-05
2271	0.00008603	8.08954E-05
2272	0.00007762	7.23116E-05
2273	0.00007013	6.50359E-05
2274	0.00006356	5.88138E-05
2275	0.00005782	5.345E-05
2276	0.00005606	6.17791E-05
2277	0.00005282	5.76902E-05
2278	0.00004985	5.39972E-05
2279	0.00004713	5.06504E-05
2280	0.00004464	4.76074E-05
2281	0.0000575	5.99518E-05
2282	0.00005408	5.55076E-05
2283	0.00005086	5.15435E-05
2284	0.0000479	4.79922E-05
2285	0.0000451	4.4798E-05
2286	0.0000579	5.85548E-05
2287	0.0000542	5.38581E-05
2288	0.0000508	4.97085E-05
2289	0.0000476	4.60238E-05
2290	0.0000446	4.27365E-05
2291	0.0000578	5.74132E-05
2292	0.000054	5.25222E-05
2293	0.0000503	4.82348E-05

No.	ec(given)	ec(regressed)
2294	0.0000469	4.4455E-05
2295	0.0000438	4.11052E-05
2296	0.0000575	5.64426E-05
2297	0.0000534	5.13951E-05
2298	0.0000496	4.7E-05
2299	0.0000461	4.31489E-05
2300	0.0000428	3.97551E-05
2301	0.0001108	0.000123659
2302	0.00009586	0.000109684
2303	0.00008394	9.79748E-05
2304	0.00007423	8.80629E-05
2305	0.00006621	7.95962E-05
2306	0.0001142	0.000117278
2307	0.00009826	0.000102663
2308	0.0000855	9.06451E-05
2309	0.00007512	8.0639E-05
2310	0.00006656	7.22169E-05
2311	0.000114	0.000112548
2312	0.00009759	9.75498E-05
2313	0.00008448	8.53882E-05
2314	0.00007384	7.53863E-05
2315	0.00006511	6.70581E-05
2316	0.0001124	0.000108777
2317	0.0000958	9.35269E-05
2318	0.00008256	8.13007E-05
2319	0.00007187	7.13438E-05
2320	0.00006313	6.3124E-05
2321	0.0001103	0.000105635
2322	0.00009359	9.02129E-05
2323	0.00008035	7.79658E-05
2324	0.0000697	6.80731E-05
2325	0.00006103	5.99642E-05
2326	0.00007893	8.70555E-05
2327	0.00006961	7.87315E-05
2328	0.00006204	7.15571E-05
2329	0.00005578	6.53284E-05
2330	0.00005052	5.98853E-05
2331	0.00008303	8.32852E-05
2332	0.00007294	7.44526E-05
2333	0.00006467	6.69655E-05
2334	0.0000578	6.05622E-05
2335	0.00005203	5.50419E-05
2336	0.00008424	8.04579E-05
2337	0.00007368	7.1293E-05
2338	0.000065	6.36216E-05
2339	0.0000578	5.7134E-05
2340	0.00005177	5.15971E-05
2341	0.00008415	7.81821E-05
2342	0.00007327	6.87804E-05
2343	0.00006435	6.09907E-05
2344	0.00005697	5.44624E-05

No.	ec(given)	ec(regressed)
2345	0.00005081	4.89357E-05
2346	0.00008341	7.62718E-05
2347	0.00007233	6.66922E-05
2348	0.00006326	5.88235E-05
2349	0.00005579	5.22789E-05
2350	0.00004958	4.67755E-05
2351	0.0000537	6.02957E-05
2352	0.0000483	5.54619E-05
2353	0.0000438	5.11911E-05
2354	0.00004	4.73985E-05
2355	0.0000368	4.40149E-05
2356	0.0000572	5.81218E-05
2357	0.0000514	5.29269E-05
2358	0.0000465	4.84032E-05
2359	0.0000423	4.44393E-05
2360	0.0000388	4.09459E-05
2361	0.0000588	5.64749E-05
2362	0.0000527	5.1032E-05
2363	0.0000475	4.63446E-05
2364	0.000043	4.22784E-05
2365	0.0000392	3.87278E-05
2366	0.0000594	5.51384E-05
2367	0.000053	4.95105E-05
2368	0.0000476	4.47074E-05
2369	0.00004297	4.05748E-05
2370	0.00003902	3.69928E-05
2371	0.00005945	5.4009E-05
2372	0.00005289	4.82359E-05
2373	0.0000473	4.33468E-05
2374	0.00004256	3.91691E-05
2375	0.0000385	3.55706E-05
2376	0.00003525	4.11597E-05
2377	0.0000323	3.84151E-05
2378	0.00002983	3.59376E-05
2379	0.00002772	3.36934E-05
2380	0.00002589	3.1654E-05
2381	0.00003786	3.99329E-05
2382	0.00003474	3.69507E-05
2383	0.0000321	3.42921E-05
2384	0.0000297	3.19118E-05
2385	0.0000277	2.9772E-05
2386	0.0000392	3.89953E-05
2387	0.0000359	3.58443E-05
2388	0.0000331	3.3062E-05
2389	0.0000306	3.0593E-05
2390	0.0000284	2.83917E-05
2391	0.0000399	3.82292E-05
2392	0.0000365	3.49484E-05
2393	0.0000335	3.20744E-05
2394	0.0000309	2.95423E-05
2395	0.0000286	2.72998E-05

No.	ec(given)	ec(regressed)
2396	0.0000402	3.75779E-05
2397	0.0000368	3.41926E-05
2398	0.0000337	3.1247E-05
2399	0.0000309	2.86677E-05
2400	0.0000285	2.63963E-05

APPENDIX C: COMPARISON OF GIVEN ϵ_T AND ANN PREDICTED ϵ_T

No.	et (GIVEN)	et (ANN)
1	-0.0000677590	-0.0000676616
2	-0.0000959148	-0.0000960772
3	-0.0000398305	-0.0000396032
4	-0.0000717210	-0.0000718184
5	-0.0000717534	-0.0000716885
6	-0.0000537623	-0.0000535350
7	-0.0001010134	-0.0001013382
8	-0.0000556458	-0.0000557108
9	-0.0000924400	-0.0000931869
10	-0.0000787356	-0.0000782160
11	-0.0000252168	-0.0000251518
12	-0.0000631476	-0.0000633424
13	-0.0001517069	-0.0001519342
14	-0.0000757154	-0.0000759752
15	-0.0000261261	-0.0000261261
16	-0.0000313870	-0.0000311272
17	-0.0001789859	-0.0001797978
18	-0.0000177150	-0.0000179748
19	-0.0000815284	-0.0000816908
20	-0.0000660378	-0.0000660378
21	-0.0000630826	-0.0000629527
22	-0.0000885755	-0.0000882832
23	-0.0000173903	-0.0000175527
24	-0.0000289839	-0.0000291462
25	-0.0000569448	-0.0000567500
26	-0.0000893874	-0.0000895173
27	-0.0000425584	-0.0000424610
28	-0.0000920503	-0.0000920178
29	-0.0000239178	-0.0000242750
30	-0.0001696006	-0.0001704774
31	-0.0000619135	-0.0000620434
32	-0.0001427113	-0.0001423216
33	-0.0000251843	-0.0000251518
34	-0.0000908812	-0.0000911085
35	-0.0000507746	-0.0000511643
36	-0.0000925699	-0.0000925374
37	-0.0000410970	-0.0000408697
38	-0.0001242980	-0.0001247526
39	-0.0000488910	-0.0000491833
40	-0.0000351216	-0.0000349917
41	-0.0000859125	-0.0000856203
42	-0.0000243724	-0.0000244374
43	-0.0001204984	-0.0001203360
44	-0.0000977010	-0.0000979932
45	-0.0001029944	-0.0001037413
46	-0.0000957849	-0.0000960772
47	-0.0000241776	-0.0000244049
48	-0.0000760726	-0.0000764623
49	-0.0000468451	-0.0000471374
50	-0.0000199883	-0.0000201831

No.	et (GIVEN)	et (ANN)
51	-0.0000638295	-0.0000635373
52	-0.0000654858	-0.0000657131
53	-0.0000585686	-0.0000585686
54	-0.0000673693	-0.0000671745
55	-0.0001847989	-0.0001888583
56	-0.0001231938	-0.0001240057
57	-0.0000745463	-0.0000748710
58	-0.0000227487	-0.0000226512
59	-0.0000618810	-0.0000621084
60	-0.0002280881	-0.0002288350
61	-0.0000438249	-0.0000435651
62	-0.0000273926	-0.0000274575
63	-0.0000193063	-0.0000195661
64	-0.0002077912	-0.0002077912
65	-0.0001029944	-0.0001029944
66	-0.0001018902	-0.0001017279
67	-0.0000171954	-0.0000175527
68	-0.0000261261	-0.0000262560
69	-0.0000899070	-0.0000893549
70	-0.0001621963	-0.0001638525
71	-0.0000205079	-0.0000202806
72	-0.0000455786	-0.0000452538
73	-0.0001445949	-0.0001448222
74	-0.0000430780	-0.0000435327
75	-0.0000613614	-0.0000619135
76	-0.0000586335	-0.0000588933
77	-0.0000879909	-0.0000885430
78	-0.0000506122	-0.0000506122
79	-0.0001469980	-0.0001482645
80	-0.0000822104	-0.0000821130
81	-0.0000354789	-0.0000352191
82	-0.0000225538	-0.0000232358
83	-0.0001931125	-0.0001965873
84	-0.0000262884	-0.0000262235
85	-0.0000210924	-0.0000212223
86	-0.0000497679	-0.0000498003
87	-0.0000326211	-0.0000325886
88	-0.0000795474	-0.0000797098
89	-0.0000855878	-0.0000862698
90	-0.0000184944	-0.0000181697
91	-0.0000645115	-0.0000649337
92	-0.0001784988	-0.0001800576
93	-0.0000703895	-0.0000709740
94	-0.0000263859	-0.0000261910
95	-0.0001580070	-0.0001576498
96	-0.0000434677	-0.0000436950
97	-0.0000901668	-0.0000889652
98	-0.0000766896	-0.0000767546
99	-0.0000422012	-0.0000416166
100	-0.0000649662	-0.0000650636

No.	et (GIVEN)	et (ANN)
101	-0.0001270908	-0.0001270584
102	-0.0001724909	-0.0001732053
103	-0.0000762025	-0.0000762350
104	-0.0001129967	-0.0001136787
105	-0.0000791253	-0.0000795150
106	-0.0000265158	-0.0000266781
107	-0.0001573900	-0.0001568704
108	-0.0000477219	-0.0000478518
109	-0.0000744489	-0.0000744813
110	-0.0001288120	-0.0001286172
111	-0.0000534375	-0.0000532752
112	-0.0001040011	-0.0001047156
113	-0.0000382392	-0.0000382068
114	-0.0000265807	-0.0000266457
115	-0.0000817882	-0.0000811712
116	-0.0000986103	-0.0000990974
117	-0.0000383042	-0.0000380444
118	-0.0001610922	-0.0001623587
119	-0.0000430455	-0.0000428832
120	-0.0000714936	-0.0000722081
121	-0.0000215795	-0.0000217744
122	-0.0000612640	-0.0000618486
123	-0.0000736370	-0.0000738643
124	-0.0000762350	-0.0000762025
125	-0.0000709416	-0.0000713637
126	-0.0000523009	-0.0000525282
127	-0.0000795150	-0.0000800346
128	-0.0000638620	-0.0000644466
129	-0.0000863997	-0.0000868543
130	-0.0000429156	-0.0000432404
131	-0.0000615238	-0.0000613290
132	-0.0000793850	-0.0000791577
133	-0.0000449940	-0.0000451889
134	-0.0000823728	-0.0000826650
135	-0.0000577567	-0.0000579840
136	-0.0002112011	-0.0002110712
137	-0.0000434677	-0.0000436626
138	-0.0000340175	-0.0000339850
139	-0.0000567175	-0.0000566526
140	-0.0001402107	-0.0001397561
141	-0.0001734002	-0.0001743095
142	-0.0000724029	-0.0000722730
143	-0.0000652584	-0.0000656806
144	-0.0000338226	-0.0000336278
145	-0.0000625305	-0.0000623032
146	-0.0001303059	-0.0001304358
147	-0.0001011108	-0.0001011758
148	-0.0000564902	-0.0000563928
149	-0.0000898420	-0.0000895822
150	-0.0000684410	-0.0000686683

No.	et (GIVEN)	et (ANN)
151	-0.0001118925	-0.0001123147
152	-0.0000883157	-0.0000883806
153	-0.0000807165	-0.0000808789
154	-0.0000502875	-0.0000502225
155	-0.0000895173	-0.0000898420
156	-0.0000779562	-0.0000769819
157	-0.0000425909	-0.0000425584
158	-0.0000551262	-0.0000550613
159	-0.0000740267	-0.0000735720
160	-0.0000379794	-0.0000377521
161	-0.0000481441	-0.0000486637
162	-0.0000821130	-0.0000821454
163	-0.0000728251	-0.0000735071
164	-0.0000743514	-0.0000748710
165	-0.0000225538	-0.0000230085
166	-0.0000488910	-0.0000487611
167	-0.0000407073	-0.0000407073
168	-0.0000873414	-0.0000878935
169	-0.0002085057	-0.0002091552
170	-0.0000980907	-0.0000981556
171	-0.0001641123	-0.0001642098
172	-0.0002114934	-0.0002116557
173	-0.0001238109	-0.0001249800
174	-0.0000372975	-0.0000373624
175	-0.0000450265	-0.0000449616
176	-0.0000758128	-0.0000762675
177	-0.0000373624	-0.0000374923
178	-0.0001426139	-0.0001431984
179	-0.0000663301	-0.0000663301
180	-0.0001375153	-0.0001377426
181	-0.0001227067	-0.0001217649
182	-0.0000813660	-0.0000813011
183	-0.0000512942	-0.0000512292
184	-0.0000577892	-0.0000579191
185	-0.0000397656	-0.0000399929
186	-0.0000559056	-0.0000559381
187	-0.0001089048	-0.0001094569
188	-0.0000205728	-0.0000207677
189	-0.0001309878	-0.0001316049
190	-0.0000919204	-0.0000921802
191	-0.0001042934	-0.0001044558
192	-0.0002688117	-0.0002608229
193	-0.0000397331	-0.0000396032
194	-0.0000661028	-0.0000664600
195	-0.0000565551	-0.0000564902
196	-0.0000772092	-0.0000773716
197	-0.0000209950	-0.0000208651
198	-0.0000611341	-0.0000611016
199	-0.0001056898	-0.0001060795
200	-0.0000493132	-0.0000493457

No.	et (GIVEN)	et (ANN)
201	-0.0000579516	-0.0000575943
202	-0.0000209950	-0.0000207352
203	-0.0001666129	-0.0001663856
204	-0.0000243399	-0.0000246647
205	-0.0001090997	-0.0001087749
206	-0.0000813011	-0.0000815284
207	-0.0000283019	-0.0000283343
208	-0.0002285103	-0.0002294845
209	-0.0001140034	-0.0001141333
210	-0.0000652584	-0.0000650311
211	-0.0000915957	-0.0000915307
212	-0.0000366155	-0.0000366155
213	-0.0000406749	-0.0000407723
214	-0.0000146949	-0.0000144351
215	-0.0000721107	-0.0000718184
216	-0.0000269704	-0.0000269379
217	-0.0000517488	-0.0000516839
218	-0.0001099116	-0.0001097817
219	-0.0000274900	-0.0000271653
220	-0.0000486637	-0.0000488261
221	-0.0000756829	-0.0000769819
222	-0.0001366060	-0.0001366060
223	-0.0000552886	-0.0000553211
224	-0.0001820061	-0.0001826556
225	-0.0002029849	-0.0002039916
226	-0.0001288120	-0.0001290393
227	-0.0000158964	-0.0000159614
228	-0.0000548015	-0.0000549639
229	-0.0000642842	-0.0000638295
230	-0.0000217419	-0.0000221641
231	-0.0001179978	-0.0001178355
232	-0.0001112106	-0.0001118276
233	-0.0001737899	-0.0001746992
234	-0.0000730849	-0.0000731823
235	-0.0000438249	-0.0000452863
236	-0.0000872765	-0.0000874713
237	-0.0000802944	-0.0000810413
238	-0.0000487936	-0.0000486312
239	-0.0000572046	-0.0000572371
240	-0.0000183970	-0.0000182022
241	-0.0000495730	-0.0000498003
242	-0.0001275130	-0.0001270908
243	-0.0001032867	-0.0001033191
244	-0.0000531777	-0.0000530154
245	-0.0000786057	-0.0000785407
246	-0.0000681162	-0.0000685059
247	-0.0000613290	-0.0000618486
248	-0.0000729550	-0.0000734097
249	-0.0000646414	-0.0000645115
250	-0.0000434028	-0.0000433703

No.	et (GIVEN)	et (ANN)
251	-0.0001326116	-0.0001329363
252	-0.0000368103	-0.0000368428
253	-0.0001098141	-0.0001100090
254	-0.0000483390	-0.0000485663
255	-0.0000618810	-0.0000616537
256	-0.0001607025	-0.0001626185
257	-0.0000537298	-0.0000536324
258	-0.0000605171	-0.0000602248
259	-0.0000869842	-0.0000872115
260	-0.0000517813	-0.0000515865
261	-0.0000158964	-0.0000160913
262	-0.0000208002	-0.0000206703
263	-0.0000570423	-0.0000569448
264	-0.0000645115	-0.0000645440
265	-0.0001029944	-0.0001033191
266	-0.0000826650	-0.0000826001
267	-0.0000249245	-0.0000249245
268	-0.0002147084	-0.0002161048
269	-0.0000329133	-0.0000328809
270	-0.0000547041	-0.0000551912
271	-0.0001820061	-0.0001808694
272	-0.0001075084	-0.0001075409
273	-0.0000936416	-0.0000942261
274	-0.0001050078	-0.0001021176
275	-0.0000254441	-0.0000254766
276	-0.0001292991	-0.0001291043
277	-0.0001001041	-0.0001006237
278	-0.0000335953	-0.0000334979
279	-0.0000782160	-0.0000781510
280	-0.0000837692	-0.0000835743
281	-0.0001193943	-0.0001193293
282	-0.0000526581	-0.0000524633
283	-0.0002206838	-0.0002230869
284	-0.0000725978	-0.0000725328
285	-0.0000646089	-0.0000647388
286	-0.0000711039	-0.0000709091
287	-0.0000735396	-0.0000736695
288	-0.0001597932	-0.0001610597
289	-0.0000214496	-0.0000214496
290	-0.0000340500	-0.0000335953
291	-0.0000401877	-0.0000398630
292	-0.0000550613	-0.0000547041
293	-0.0000788655	-0.0000788655
294	-0.0001725883	-0.0001746342
295	-0.0000633099	-0.0000640244
296	-0.0000544767	-0.0000541845
297	-0.0002142862	-0.0002157801
298	-0.0000192089	-0.0000191115
299	-0.0000271003	-0.0000270029
300	-0.0000581789	-0.0000581139

No.	et (GIVEN)	et (ANN)
301	-0.0000709416	-0.0000714612
302	-0.0000554185	-0.0000553536
303	-0.0001372880	-0.0001367034
304	-0.0001100090	-0.0001102038
305	-0.0000307050	-0.0000304452
306	-0.0000309973	-0.0000310947
307	-0.0000728901	-0.0000734097
308	-0.0000939663	-0.0000942261
309	-0.0000663626	-0.0000664925
310	-0.0000886729	-0.0000892250
311	-0.0000569124	-0.0000572696
312	-0.0000267431	-0.0000267756
313	-0.0000360959	-0.0000362583
314	-0.0001044882	-0.0001053001
315	-0.0000339850	-0.0000340175
316	-0.0000287890	-0.0000287241
317	-0.0000990324	-0.0000990974
318	-0.0000823078	-0.0000823078
319	-0.0001293966	-0.0001293641
320	-0.0001064043	-0.0001065666
321	-0.0000654858	-0.0000658430
322	-0.0001390092	-0.0001408602
323	-0.0002204889	-0.0002213333
324	-0.0000381418	-0.0000376872
325	-0.0001136137	-0.0001130616
326	-0.0000346995	-0.0000345046
327	-0.0000412269	-0.0000413893
328	-0.0000976685	-0.0000984154
329	-0.0000285617	-0.0000285292
330	-0.0000447992	-0.0000443445
331	-0.0001294940	-0.0001282599
332	-0.0000445719	-0.0000450915
333	-0.0000615238	-0.0000612640
334	-0.0000326535	-0.0000327834
335	-0.0000241451	-0.0000243724
336	-0.0001195891	-0.0001202711
337	-0.0001447897	-0.0001456990
338	-0.0000170006	-0.0000167733
339	-0.0001093920	-0.0001095219
340	-0.0000828924	-0.0000831197
341	-0.0001603128	-0.0001606050
342	-0.0000660378	-0.0000661028
343	-0.0000891276	-0.0000897121
344	-0.0000702921	-0.0000705843
345	-0.0000732148	-0.0000736045
346	-0.0000553860	-0.0000553211
347	-0.0000255090	-0.0000253142
348	-0.0000851007	-0.0000851007
349	-0.0001572926	-0.0001592736
350	-0.0000690905	-0.0000683436

No.	et (GIVEN)	et (ANN)
351	-0.0000296009	-0.0000296983
352	-0.0000164160	-0.0000164810
353	-0.0000508071	-0.0000508395
354	-0.0000577567	-0.0000574969
355	-0.0001735950	-0.0001727507
356	-0.0000848733	-0.0000851331
357	-0.0000422661	-0.0000421038
358	-0.0000352515	-0.0000353490
359	-0.0002052906	-0.0002108114
360	-0.0000208976	-0.0000208651
361	-0.0000595104	-0.0000592830
362	-0.0001612870	-0.0001630407
363	-0.0000774041	-0.0000774366
364	-0.0002139939	-0.0002151955
365	-0.0001319946	-0.0001322219
366	-0.0001266037	-0.0001271883
367	-0.0000476570	-0.0000471699
368	-0.0001965873	-0.0001969121
369	-0.0000910111	-0.0000914982
370	-0.0000360959	-0.0000358686
371	-0.0000451239	-0.0000446368
372	-0.0000514890	-0.0000513267
373	-0.0000929271	-0.0000932844
374	-0.0000993572	-0.0000996170
375	-0.0000217744	-0.0000218394
376	-0.0000310298	-0.0000309648
377	-0.0000768845	-0.0000770469
378	-0.0000963370	-0.0000967917
379	-0.0000266132	-0.0000265482
380	-0.0000391161	-0.0000391161
381	-0.0000822753	-0.0000831846
382	-0.0000717534	-0.0000719158
383	-0.0001085151	-0.0001086450
384	-0.0001529085	-0.0001532007
385	-0.0000851331	-0.0000856527
386	-0.0000509370	-0.0000509694
387	-0.0000895822	-0.0000899070
388	-0.0000442796	-0.0000442471
389	-0.0000313221	-0.0000314844
390	-0.0000476245	-0.0000464229
391	-0.0001079955	-0.0001086450
392	-0.0000282369	-0.0000283993
393	-0.0000971489	-0.0000970515
394	-0.0000766247	-0.0000766247
395	-0.0000735720	-0.0000735071
396	-0.0000923101	-0.0000921802
397	-0.0000677915	-0.0000675642
398	-0.0002049984	-0.0002042514
399	-0.0001055924	-0.0001055274
400	-0.0000348943	-0.0000346995

APPENDIX D: OVERLAY DESIGN PROGRAM

Overlay Design Program has been developed as a tool to help design the HMA overlay thickness over fractured PCC slabs.

Overlay Design Program is a compiled Visual Basic Program. This program is available on CD, along with a folder file named “Overlay Thickness,” which contains the component form and module source codes in Visual Basic for the compiled program.

The program is designed to run on IBM PC or 100% compatibles with Windows 95 or later operating systems. A memory of at least 256 kB is required. Access to and use of the source code material will require the presence of Microsoft Visual Basic v 6 or later.

The program is a skeleton program without peripheral requirements. Input and output are screen-based.